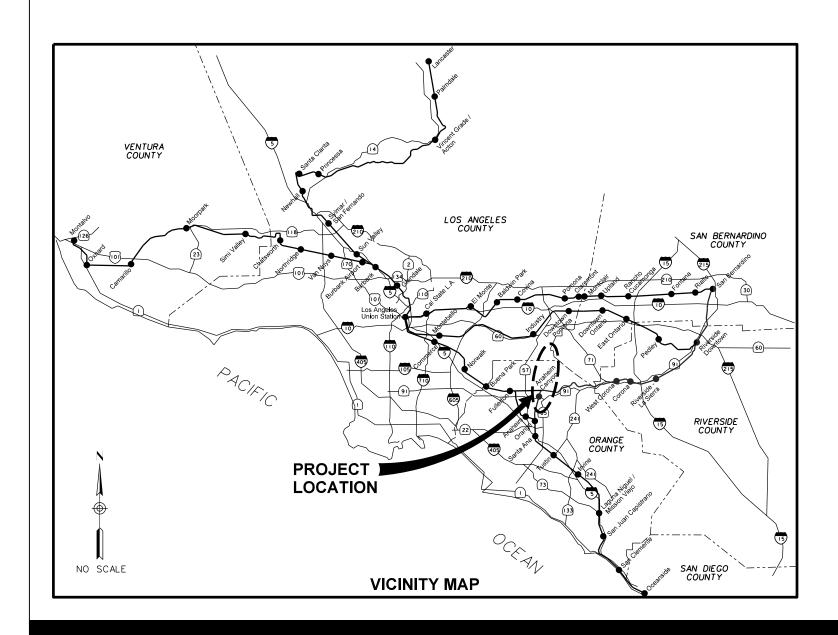


SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY ANAHEIM CANYON METROLINK STATION PROJECT

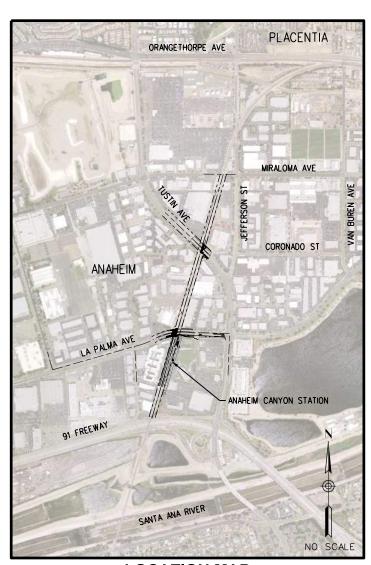




JANUARY 20, 2017

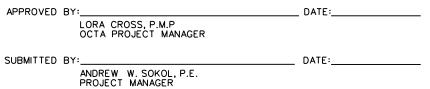
30% SUBMITTAL NOT FOR CONSTRUCTION

CONTRACT No. C-4-1977



LOCATION MAP









SHEET	DRAWING	DRAWING TITLE
		GENERAL
1 2 3 4 5 6 7 8 9 10 11 12	GI-001 GI-002 GI-010 GI-011 GI-012 GI-013 GI-021 GI-022 GI-023 GI-024 GC-101 GC-102	COVER SHEET INDEX OF DRAWINGS INDEX MAP LEGENDS AND SYMBOLS ABBREVIATIONS GENERAL NOTES SURVEY CONTROL • SHEET 1 OF 4 SURVEY CONTROL • SHEET 2 OF 4 SURVEY CONTROL • SHEET 3 OF 4 SURVEY CONTROL • SHEET 3 OF 4 SURVEY CONTROL • SHEET 4 OF 4 CONSTRUCTION PHASING PLAN • EXISTING CONDITIONS AND PHASE 1 • SHEET 1 OF 2 CONSTRUCTION PHASING PLAN • PHASE 2 AND 3 • SHEET 2 OF 2
		TRACK
13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	CK-001 CK-002 CK-011 CK-012 CK-013 CK-020 CK-021 CK-101 CK-102 CK-103 CK-104 CK-201 CK-201 CK-202 CK-203 CK-204 CK-205	TRACK CHARTS • SHEET 1 OF 2 TRACK CHARTS • SHEET 2 OF 2 TYPICAL SECTIONS • SHEET 1 OF 2 TYPICAL SECTIONS • SHEET 1 OF 2 TYPICAL SECTIONS • SHEET 2 OF 2 RAILROAD SIGNAL GRADING DETAILS HORIZONTAL CURVE GEOMETRY GEOMETRY TABLES TRACK PLAN & PROFILE • MTRK 73·55 TO MTRK 62·00 • SHEET 1 OF 4 TRACK PLAN & PROFILE • MTRK 62·00 TO MTRK 50·00 • SHEET 2 OF 4 TRACK PLAN & PROFILE • MTRK 50·00 TO MTRK 38·00 • SHEET 3 OF 4 TRACK PLAN & PROFILE • MTRK 38·00 TO MTRK 35·11 • SHEET 4 OF 4 CROSS SECTIONS • MTRK 35·00 TO MTRK 42·00 • SHEET 1 OF 5 CROSS SECTIONS • MTRK 43·00 TO MTRK 50·00 • SHEET 2 OF 5 CROSS SECTIONS • MTRK 51·00 TO MTRK 58·00 • SHEET 3 OF 5 CROSS SECTIONS • MTRK 50·00 TO MTRK 58·00 • SHEET 3 OF 5 CROSS SECTIONS • MTRK 50·00 TO MTRK 58·00 • SHEET 4 OF 5
		CIVIL
29 30 31 32 33 34 35 36 37 38	CG-001 CG-002 CG-101 CG-102 CG-103 CG-104 CI-011 CI-101 CP-101	DRAINAGE DETAILS • SHEET 1 OF 2 DRAINAGE DETAILS • SHEET 2 OF 2 DRAINAGE PLAN • MTRK 73+55 TO MTRK 62+00 • SHEET 1 OF 4 DRAINAGE PLAN • MTRK 62+00 TO MTRK 50+00 • SHEET 2 OF 4 DRAINAGE PLAN • MTRK 50+00 TO MTRK 38+00 • SHEET 3 OF 4 DRAINAGE PLAN • MTRK 38+00 TO MTRK 35+11 • SHEET 4 OF 4 RETAINING WALL • TYPICAL SECTIONS RETAINING WALL PLAN & PROFILE • SDNG 68+66 TO SDNG 61+86 MISCELLANEOUS CIVIL IMPROVEMENTS • LA PALMA AVENUE • CLASS II BIKE LANE MISCELLANEOUS CIVIL IMPROVEMENTS • STATION • WALKWAYS AND CURB RAMPS
		UTILITIES
39 40 41 42	CU-101 CU-102 CU-103 CU-104	COMPOSITE UTILITY PLAN * MTRK 73.55 TO MTRK 62.00 * SHEET 1 OF 4 COMPOSITE UTILITY PLAN * MTRK 62.00 TO MTRK 50.00 * SHEET 2 OF 4 COMPOSITE UTILITY PLAN * MTRK 50.00 TO MTRK 38.00 * SHEET 3 OF 4 COMPOSITE UTILITY PLAN * MTRK 38.00 TO MTRK 35.11 * SHEET 4 OF 4
		GRADE CROSSINGS
43 44 45 46	CS-101 CS-102 CS-111 CS-112	ROADWAY PLAN & PROFILE • LA PALMA AVENUE GRADE CROSSING LAYOUT PLAN • LA PALMA AVENUE ROADWAY PLAN & PROFILE • TUSTIN AVENUE GRADE CROSSING LAYOUT PLAN • TUSTIN AVENUE
		ARCHITECTURAL
47 48 49 50 51 52 53 54 55 56 57	AS-101 AS-102 AS-105 AS-106 AS-107 AS-108 AS-109 AS-111 AS-111 AS-112 AS-151	ANAHEIM CANYON STATION · ARCHITECTURAL · SYMBOLS AND NOTES ANAHEIM CANYON STATION · ARCHITECTURAL · ABBREVIATIONS ANAHEIM CANYON STATION · OVERALL STATION · SITE PLAN ANAHEIM CANYON STATION · OVERALL PLATFORM PLAN ANAHEIM CANYON STATION · PLATFORM AND CANOPY PLAN · SHEET 1 OF 4 ANAHEIM CANYON STATION · PLATFORM AND CANOPY PLAN · SHEET 2 OF 4 ANAHEIM CANYON STATION · PLATFORM AND CANOPY PLAN · SHEET 3 OF 4 ANAHEIM CANYON STATION · PLATFORM AND CANOPY PLAN · SHEET 4 OF 4 ANAHEIM CANYON STATION · PLATFORM CANOPY PLAN, REFLECTED · CELLING PLAN AND ROOF PLAN ANAHEIM CANYON STATION · PLATFORM CANOPY · SECTIONS & ELEVATIONS ANAHEIM CANYON STATION · PLATFORM CANOPY · SECTIONS & ELEVATIONS

D. BARRAZA

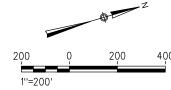
A. SOKOL 01-20-2017

SHEET	DRAWING	DRAWING TITLE
		STRUCTURAL
58 59 60 61 62 63 64	\$\$-101 \$\$-102 \$\$-103 \$\$-104 \$\$-105 \$\$-106 \$\$-107 \$\$-108	ANAHEIM CANYON STATION • STRUCTURAL GENERAL NOTES • SHEET 1 OF 2 ANAHEIM CANYON STATION • STRUCTURAL GENERAL NOTES • SHEET 2 OF 2 ANAHEIM CANYON STATION • PLATFORM AND CANOPY STRUCTURAL PLAN • SHEET 1 OF 4 ANAHEIM CANYON STATION • PLATFORM AND CANOPY STRUCTURAL PLAN • SHEET 2 OF 4 ANAHEIM CANYOM STATION • PLATFORM AND CANOPY STRUCTURAL PLAN • SHEET 3 OF 4 ANAHEIM CANYON STATION • PLATFORM AND CANOPY STRUCTURAL PLAN • SHEET 4 OF 4 ANAHEIM CANYON STATION • PLATFORM CANOPY STRUCTURAL PLAN ANAHEIM CANYON STATION • PLATFORM CANOPY • STRUCTURAL SECTIONS & ELEVATIONS
		ELECTRICAL
66 67 68 69	ES-101 ES-102 ES-111 ES-121	ANAHEIM CANYON STATION · ELECTRICAL GENERAL NOTES · SYMBOLS AND ABBREVIATIONS ANAHEIM CANYON STATION · ELECTRICAL SITE PLAN ANAHEIM CANYON STATION · STATION SINGLE LINE DIAGRAM · AND PANEL SCHEDULE ANAHEIM CANYON STATION · ELECTRICAL DETAILS
		PLUMBING
70 71	PS-101 PS-102	ANAHEIM CANYON STATION : PLUMBING GENERAL NOTES : SYMBOLS AND ABBREVIATIONS ANAHEIM CANYON STATION : PLUMBING : SITE PLAN



ANAHEIM CANYON METROLINK STATION PROJECT

GI-002 REVISION SHEET NO. 2 OF 71



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DESIGNED BY
D. BARRAZA D. BARRAZA

S. RUGGLES

S. RUGGLES

NOT FOR CONSTRUCTION

S. RUGGLES

NOT FOR CONSTRUCTION A. SOKOL

01-20-2017

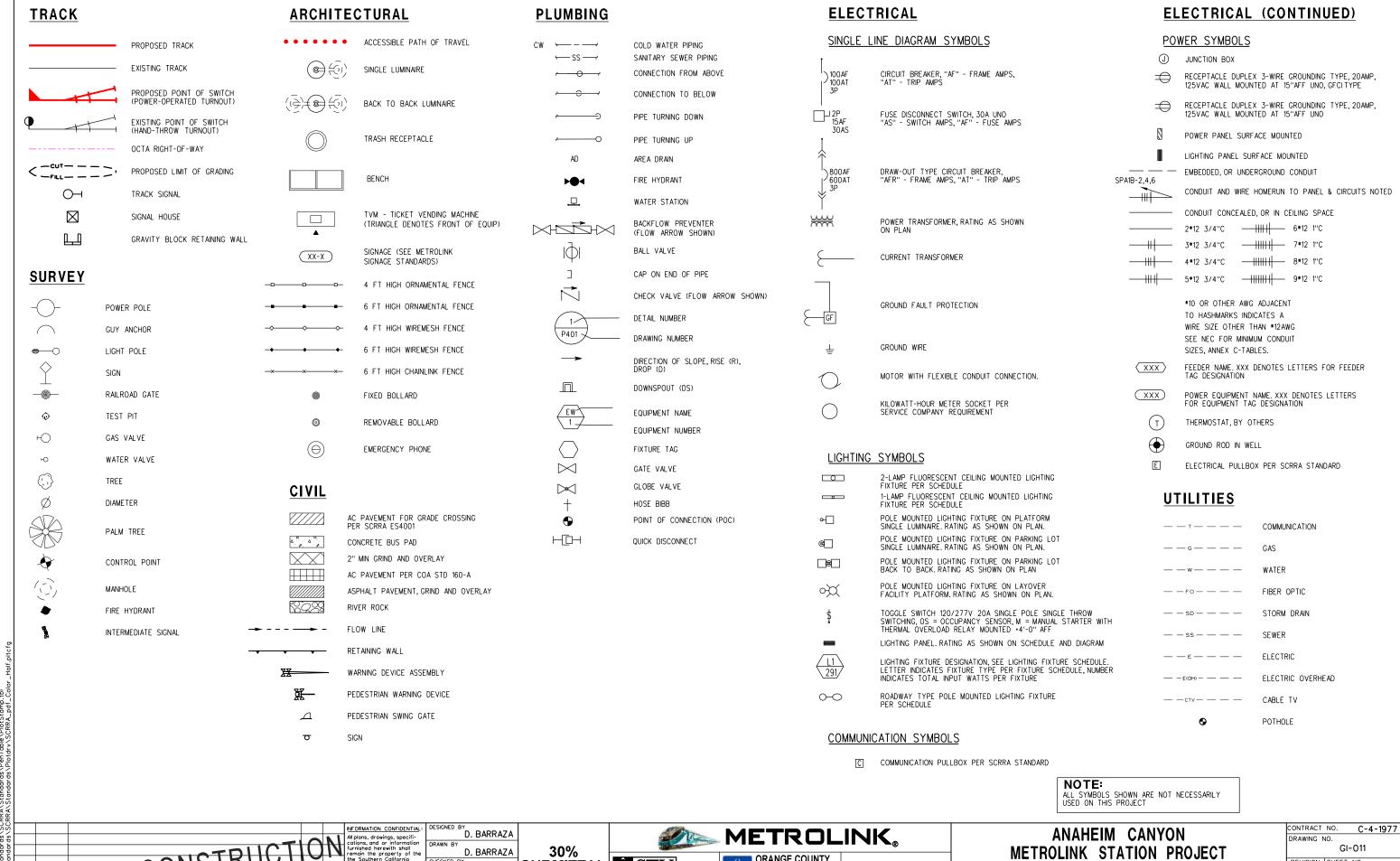




ANAHEIM CANYON METROLINK STATION PROJECT

INDEX MAP

=200'				
	CONTRACT	NO.	C-4	-1977
	DRAWING N	10.		
		GI-	-010	
	REVISION	SHEET	NO.	
		3	OF	71
	SCALE		1 "=2	200′



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BY SUB. APP.

S. RUGGLES A. SOKOL

01-20-2017

SUBMITTAL





LEGENDS AND SYMBOLS

CONTRACT	NO.	C-4	-1977
DRAWING N	١٥.		
	GI-	-011	
REVISION	SHEET	NO.	
	4	OF	71
SCALE		N	IONE

&	AND	HDPE	HIGH-DENSITY POLYETHYLENE
@	AT	HMA	HOT-MIX ASPHALT
ı			HOT-MIX ASPHALT CONCRETE
	FOOT, FEET, MINUTE(S)	HMAC	
	INCH, INCHES, SECOND(S)	HORIZ	HORIZONTAL
%	PERCENT	HW	HEADWALL
•	POUND, NUMBER	HT	HAND THROW
Δ	DELTA (ANGLE)	HTTO	HAND THROW TURNOUT
	ASTERISK, PRESTESSED CONCRETE FASCIA GIRDER MARK		
		IND	INDUSTRY TRACK
AC	ASPHALT CONCRETE	INV	INVERT
ADA	AMERICAN DISABILITIES ACT	IP	IRON PIPE
AGG	AGGREGATE		
AP	ANGLE POINT	L	LENGTH
APPROX	APPROXIMATELY	LA	LOS ANGELES
AVE	AVENUE	LACDPW	LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
AVL	AVENUE		LEFT HAND
D.D.	DECIMALING OF DRIDGE	LH	
BB	BEGINNING OF BRIDGE	LOL	LAYOUT LINE
BC	BEGINNING OF CURVE	LT	LEFT, LEAD TRACK
BEG	BEGIN or BEGINNING	Ls	LENGTH OF SPIRAL
BLVD	BOULEVARD		
BNSF	BNSF RAILWAY	MAX	MAXIMUM
B/R	BOTTOM OF RAIL	MED	MEDIAN
		METRO	LOS ANGELES COUNTY METROPOLITAN
CB	CATCH BASIN		TRANSPORTATION AUTHORITY
CA, CAL	CALIFORNIA	MIN	MINIMUM
CALTRANS	CALIFORNIA DEPARTMENT OF TRANSPORTATION	ML	MAINLINE
CIDH	CAST IN DRILLED HOLES	MP	MILEPOST
CIP	CAST IRON PIPE, CAST IN PLACE	MTRK	MAIN TRACK
ę.	CENTERLINE	MILLY	MAIN TRACK
		N1	NODILL NODILLEDLY NODILLING
CLR	CLEAR, CLEARANCE	N	NORTH, NORTHERLY, NORTHING
CMP	CORRUGATED METAL PIPE	NF	NEAR FACE
CMPA	CORRUGATED METAL PIPE (ARCH)	NIC	NOT IN CONTRACT
CO	CLEAN OUT	NO	NUMBER, NORTHERN
COMM	COMMUNICATION	NTS	NOT TO SCALE
COMP	COMPROMISE JOINT	N/A	NOT APPLICABLE
CONC	CONCRETE		
CP	CONTROL POINT	OC, O/C	ON CENTER
CG	CURB AND GUTTER	OCTA	ORANGE COUNTY TRANSPORTATION AUTHORITY
CS	CURVE TO SPIRAL	OD	OUTSIDE DIAMETER
CSP	CORRUGATED STEEL PIPE	OG	ORIGINAL GROUND
CPUC, PUC	CALIFORNIA PUBLIC UTILITIES COMMISSION	0P	OVERPASS
Dc	DEGREE OF CURVATURE (CHORD DEFINITION)	PB	PULLBOX
DESC	DESCRIPTION	PC	POINT OF CURVATURE
DI	DRAINAGE INLET	PCC	POINT OF COMPOUND CURVATURE
DIA, Ø	DIAMETER	PC/PS	PRECAST PRESTRESSED
DOT	DEPARTMENT OF TRANSPORTATION	PED	PEDESTRIAN
DR DR	DRIVE	PERF	PERFORATED
DWG	DRAWING	PH	POTHOLE
DWG	DIVATINO	PI	POINT OF INTERSECTION
/E/ E/ E/ICT	EVICTING		
(E), EX, EXIST		PITO	POINT OF INTERSECTION OF TURNOUT
E	EAST, EASTERLY, EASTING, EXPANSION END	PL	PLACE
Ea	SUPERELEVATION (ACTUAL)	P0	POWER OPERATED
EB	END OF BRIDGE	POB	POINT OF BEGINNING
EC	END OF CURVE	POC	POINT ON CURVE
EF	EACH FACE	POE	POINT OF ENDING
EFWBW	EAST FACE OF WEST BACK WALL	POT	POINT ON TANGENT
EG	EXISTING GRADE	POTO	POWER OPERATED TURNOUT
ELEC	ELECTRIC, ELECTRICAL	PRC	POINT OF REVERSE CURVATURE
EL, ELEV	ELEVATION	PROP	PROPOSED
ESMT	EASEMENT	PS	POINT OF SWITCH
Eu	SUPERELEVATION (UNBALANCED)	PVC	POINT OF VERTICAL CURVE, POLYVINYL CHLORIDE
		PVI	POINT OF VERTICAL INTERSECTION
F	FIXED END	PVT	POINT OF VERTICAL TANGENT
FES	FLARED END SECTION		
FF	FAR FACE	R	RADIUS
FG	FINISHED GRADE	RBM	RAILBOUND MANGANESE
*FG-#	FASCIA GIRDER NUMBER	RCB	REINFORCED CONCRETE BOX
FL			
	FLOW LINE	RCFC&WCD	RIVERSIDE FLOOD CONTROL & WATER CONSERVATION DISTRICT REINFORCED CONCRETE PIPE
FO FDA	FIBER OPTIC	RCP	
FRA	FEDERAL RAILROAD ADMINISTRATION	REQ'D	REQUIRED NAME AND
FS	FINISHED SURFACE	RPM	RAISED PAVEMENT MARKER
FT	FOOT, FEET	RR	RAILROAD
		RSP	ROCK SLOPE PROTECTION
GALV	GALVANIZED	RT	RIGHT
GB	GRADE BREAK	RH	RIGHT HAND
		R/W	RIGHT-OF-WAY

S SC SCE SCG SCRRA SD SDMH SDNG SHT SIG SMSR SO SPA SPPWC SSMH ST	SOUTH, SOUTHERLY, SLOPE SPIRAL TO CURVE SOUTHERN CALIFORNIA EDISON SOUTHERN CALIFORNIA GAS COMPANY SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY STORM DRAIN STORM DRAIN MANHOLE SIDING TRACK SHEET SIGNAL SOLID MANGANESE SPRING RAIL SOUTHERN SPACING STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION SANITARY SEWER MANHOLE SPIRAL TO TANGENT, STREET STATION STANDARD STRUCTURE
T T/C TC TG TO TOT T/R TR TR TR TR TR TR TR TYP, (TYP)	TANGENT TRACK CENTER(S) TOP OF CURB TOP OF GRATE TURNOUT TOTAL TOP OF RAIL TAPERED RAIL TRACK TANGENT TO SPIRAL TYPICAL
UD	UNDERDRAIN
UP	UNDERPASS
UPRR	UNION PACIFIC RAILROAD
V Vf Vp VERT	SPEED SPEED OF FREIGHT SPEED OF PASSENGER VERTICAL
W	WEST, WESTERLY
W/	WITH
WFEBW	WEST FACE OF EAST BACK WALL
WWM	WELDED WIRE MESH
XING	CROSSING
XO, XOVER	CROSSOVER

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D. BARRAZA A. SOKOL

01-20-2017

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NOT FOR CONSTRUCTION



ANAHEIM CANYON METROLINK STATION PROJECT

ABBREVIATIONS

CONTRACT NO. C-4-1977 DRAWING NO. GI-012 REVISION SHEET NO. 5 OF 71

ALL CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED AND COORDINATED WITH THE ENGINEER AND THE VARIOUS COMPANIES, AGENCIES, AND OTHER CONTRACTORS WHO MAY BE AFFECTED BY THIS WORK

HORIZONTAL AND VERTICAL CONTROL POINTS FOR THE SITE LAYOUT ARE IDENTIFIED IN THE CONTRACT DOCUMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO UTILIZE THESE CONTROL POINTS TO ASSURE THAT ALL FACILITIES INCLUDED IN PROJECT ARE CONSTRUCTED AT THE CORRECT HORIZONTAL AND VERTICAL LOCATIONS.

SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" IS VALID. THE CONTRACTOR SHALL CALL THE UNDERGROUND SERVICE ALERT (1-800-422-4133) TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION TO OBTAIN A DIG ALERT ID NUMBER.

CALIFORNIA SENATE BILL 1359 (APPROVED 2006) OUTLINES PROCEDURES FOR LOCATING UTILITIES BY HAND EXCAVATION. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THIS LEGISLATION AND COMPLY WITH ITS DIRECTIVE. PRIOR TO EACH CONSTRUCTION ACTIVITY WITHIN RAILROAD RIGHT-OF-WAY, THE CONTRACTOR SHALL NOTIFY RAILROAD'S SIGNAL REPRESENTATIVE.

THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR CONFLICTS WITH EXISTING UTILITIES, SIGNAL CABLES/EQUIPMENT, FIBER OPTIC LINES, AND/OR OTHER ITEMS THAT MIGHT IMPAIR CONSTRUCTION ACTIVITIES. INCONSISTENCIES FOUND SHALL BE REPORTED TO THE ENGINEER.

REPAIRS TO THE DAMAGED MATERIALS OR FACILITIES INTENDED TO REMAIN IN PLACE SHALL BE MADE BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE UNLESS OTHERWISE STATED BY THE ENGINEER.

ALL EXCAVATED WASTE MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE SITE. ON SITE STORAGE OF EXCAVATED WASTE MATERIAL SHALL NOT BE PERMITTED AT ANY TIME.

TRACK WHICH IS OUT OF SERVICE FOR A GIVEN PERIOD OF TIME. A TRACK OUTAGE

TRACK ON WHICH TRAINS ARE OPERATING AND INTERRUPTION OF SERVICE MAY OCCUR ONLY WITHIN B. ACTIVE TRACK:

C. FOULED TRACK: TRACK IS FOULED WHEN AN OBSTRUCTION IS PLACED WITHIN EIGHT (8) FEET FROM THE CENTERLINE OF THE TRACK OR WHEN AN OVERHEAD OBSTRUCTION IS PLACED WITHIN TWENTY TWO AND A HALF FEET (22'-6") ABOVE THE TOP OF RAIL.

D WORK WINDOW:

A PERIOD OF TIME WITH SPECIFIC BEGINNING AND ENDING TIME AND DURATIONS FOR WHICH THE TRACK, SIGNALS, BRIDGES, AND OTHER OPERATING SYSTEM ELEMENTS WITHIN THE OPERATING ENVELOPE ARE TEMPORARILY REMOVED FROM SERVICE OR MODIFIED IN SOME OTHER MANNER AND TRAIN AND OTHER OPERATIONS SUSPENDED OR MODIFIED TO ALLOW CONSTRUCTION OR MAINTENANCE WORK TO OCCUR. WRITTEN AUTHORITY FROM SCRRA AND AN APPROVED SITE SPECIFIC WORK PLAN (SSWP) IS REQUIRED BEFORE THE CONTRACTOR'S WORK WINDOW SHALL HAVE SPECIFIC GEOGRAPHIC LIMITS, WHICH ARE DEFINED IN THE APPROVED SSWP. MODIFICATIONS OR SUSPENSION OF TRAIN AND ON-TRACK EQUIPMENT MOVEMENTS RESULTING FROM A WORK WINDOW INVOLVES WRITTEN

CHANGES TO THE RAILROAD'S RULES OF TRAIN AND ON-TRACK EQUIPMENT OPERATIONS.

E. EXCLUSIVE TRACK WINDOW:

AN APPROVED WORK WINDOW IN WHICH NO TRAIN MOVEMENTS (EXCEPT THE CONTRACTOR OR SCRRA WORK TRAINS OR EQUIPMENT UNDER CONTROL OF THE EIC, PER THE SSWP) WILL OPERATE ON ANY TRACK WITHIN THE WINDOW LIMITS. THE CONTRACTOR MAY DISMANTLE, REMOVE, RECONSTRUCT, OR OTHERWISE OBSTRUCT TRACKS WITHIN THE LIMITS OF SUCH A WINDOW. THIS WORK MAY BE PROTECTED BY TRACK OUT OF SERVICE, TRACK AND TIME LIMITS, OR BY FORM B TRACK BULLETIN.

F. LIMITED TRACK WINDOW:

AN APPROVED WORK WINDOW FOR SOME, BUT NOT ALL TRACKS WITHIN A GENERAL WORK AREA (E.G. ONE TRACK REMAINS FOR OPERATION OF TRAINS, OTHER TRACKS ARE AVAILABLE FOR THE CONTRACTOR'S WORK). MOVEMENT OF TRAINS OVER THE TRACK(S) OF A LIMITED TRACK WINDOW IS CONTRACTOR'S WORK). MOVEMENT OF TRAINS OVER THE TRACK(S) OF A LIMITED TRACK WINDOW IS UNDER THE CONTRACTOR PERSONNEL AND EQUIPMENT ARE CLEAR OF THE OPERATING TRACK. THE CONTRACTOR MAY REMOVE, CONSTRUCT, OR OBSTRUCT ONLY THE TRACK DESIGNATED BY THE SSWP AND MUST ARRANGE THE WORK SO THAT TRAINS CAN OPERATE WITHOUT DELAY ON THE REMAINING TRACK(S) IN THE WORK AREA. THIS WORK MAY BE PROTECTED BY TRACK OUT OF SERVICE, TRACK AND TIME, OR BY FORM B

G. FORM B WORK WINDOW:

AN APPROVED WORK WINDOW IN WHICH PASSENGER, FREIGHT, AND ALL OTHER TRAINS AND ON-TRACK EQUIPMENT MOVEMENTS CAN BE PROHIBITED FROM ENTERING THE DEFINED LIMITS OF A SEGMENT OF TRACK. THE FORM B WORK WINDOW DOES NOT ALLOW THE CONTRACTOR TO REMOVE FROM SERVICE OR MODIFY THE TRACKS, SIGNALS, BRIDGES, STATIONS, OR OTHER ELEMENTS OF THE OPERATING SYSTEM IN A MANNER WHICH WILL DELAY OR IN ANY WAY AFFECT THE SAFE OPERATION OF THE TRAINS. THE FORM B WORK WINDOW ALLOWS THE CONTRACTOR THE ABILITY TO ENTER THE OPERATING ENVELOPE AND PERFORM CONSTRUCTION ACTIVITIES SUBJECT TO THE CONDITIONS ABOVE. AN EMPLOYEE-IN-CHARGE/FLAGMAN FORM SCRRA WILL EXERCISE STRICT CONTROL OVER THE CONTRACTOR'S CONSTRUCTION ACTIVITIES IN CONJUNCTION WITH ROADWAY WORKER PROTECTION REQUIREMENTS, TO ASSURE THAT THE CONTRACTOR'S ACTIVITIES DO NOT DELAY OR IMPACT TRAIN SERVICE.

CONTRACTOR'S ACTIVITIES DO NOT DELAY OR IMPACT TRAIN SERVICE.

AN APPROVED WORK WINDOW IN WHICH THE DISPATCHER WILL AUTHORIZE MEN AND EQUIPMENT TO OCCUPY A TRACK OR TRACKS WITHIN LIMITS FOR A CERTAIN TIME PERIOD. THE DISPATCHER AUTHORITY SHALL INCLUDE AUTHORITY NUMBER, TRACK DESIGNATION, LIMITS AND TIME. MOVEMENTS MAY BE MADE IN EITHER DIRECTION WITHIN THE SPECIFIED LIMITS UNTIL THE LIMITED ARE RELEASED. H. TRACK AND TIME

ON SITE CONSTRUCTION BY OTHERS (RAILROAD SIGNAL FORCES, SPRINT, UTILITIES, ETC.) MAY OCCUR DURING THE CONSTRUCTION PERIOD OF THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE ENGINEER SO AS TO

PRIOR TO COMMENCING WORK, ALL EXISTING SITE CONDITIONS SHALL BE FIELD VERIFIED WITH THE ENGINEER TO ASCERTAIN THE LIMITS OF WORK ACTIVITIES. THE CONTRACTOR SHALL SUBMIT AND RECEIVE THE ENGINEER'S APPROVAL OF THE PROJECT SCHEDULE AND OPERATIONS PLAN. EACH ITEM OF WORK SHALL BE DESCRIBED AND ACCOUNTED FOR IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR FURTHER INFORMATION REGARDING SUBMITTAL REQUIREMENTS.

RAIL TRAFFIC DISRUPTIONS SHALL BE KEPT TO A MINIMUM. DISRUPTIONS IN RAIL TRAFFIC THAT MAY BE REQUIRED SHALL BE COORDINATED WITH THE ENGINEER BEFOREHAND. NO SUCH WORK SHALL BE COMMENCED WITHOUT THE ENGINEER'S APPROVAL. WORK AFFECTING THE MOVEMENT OF TRAINS WILL BE UNDER THE AUTHORITY AND OVERALL CONTROL OF THE ENGINEER OR HIS REPRESENTATIVE. BNSF AND METROLINK COMMUTER TRAIN OPERATIONS MUST BE MAINTAINED THROUGHOUT THE

BY SUB. APP.

13. THE CONTRACTOR SHALL NOT PLACE MATERIAL AND/OR EQUIPMENT WITHIN TWENTY (20) FEET OF AN ACTIVE TRACK AT ANY TIME WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

14. WALKWAYS SHALL BE PLACED AS REQUIRED BY CALIFORNIA PUBLIC UTILITIES COMMISSION GENERAL ORDER NO. 118 AND 26D

THE CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, AND THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY HOLD SCRRA AND THE DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT

THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING FACILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN.

17. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE CODES, ORDINANCES, AND STANDARD SPECIFICATIONS OF ALL AGENCIES THAT HAVE THE RESPONSIBILITY OF REVIEWING PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF ALL ITEMS PER THESE PLANS AND SPECIFICATIONS IN THIS LOCALITY.

18. THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS AND PAY PERMIT FEES AS REQUIRED FOR CONSTRUCTION OF

THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM HIS OPERATION AND RESTORE ALL SURFACES, STRUCTURES, DITCHES AND PROPERTY TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER.

CONTRACTOR SHALL PROVIDE FOR THE CONTINUOUS OPERATION OF THE EXISTING FACILITY WITHOUT INTERRUPTION DURING CONSTRUCTION UNLESS SPECIFICALLY AUTHORIZED OTHERWISE BY THE RESPECTIVE AUTHORITY.

CONTRACTOR TO IDENTIFY DEPTH AND LOCATION OF ALL EXISTING UNDERGROUND UTILITIES. FOR LOCATION OF SIGNALS AND COMMUNICATION CONDUITS CONTACT RAILROAD SIGNAL DEPARTMENT (909) 592-4152.

22. NEW MAINLINE TRACKS SHALL BE 136RE CONTINUOUSLY WELDED RAIL (CWR) WITH PANDROL CLIPS AND CONCRETE TIES. SIDINGS AND INDUSTRY TRACKS MAY BE CONSTRUCTED FROM SECONDHAND 136RE RAIL ON TIMBER TIES.

23. MINIMUM SUB BALLAST DEPTH THROUGHOUT THE PROJECT LIMITS SHALL BE DICTATED BY THE FINAL RECOMMENDATIONS OF THE PROJECT'S GEOTECHNICAL REPORT. FINAL DESIGN TEAM TO DICTATE THE LIMITS OF THE MINIMUM SUB BALLAST DEPTH IN THE TRACK PLAN AND PROFILE DRAWINGS.

24. EXACT MODIFICATIONS TO THE PROJECT'S SPUR TRACKS TO BE DETERMINED DURING FINAL DESIGN.

25. FINAL DESIGN TEAM TO EVALUATE THE FEASIBILITY OF INCREASING THE PROJECT'S PASSENGER TRAIN DESIGN SPEED TO SEVENTY-NINE (79) MPH THROUGH COORDINATION WITH OCTA, METROLINK, BNSF, AMTRAK AND UPRR.

SCRRA IS NOT A MEMBER OF DIGALERT. THE CONTRACTOR SHALL CALL SCRRA SIGNAL DEPARTMENT AT (909)-592-1346
A MINIMUM OF FIVE (5) DAYS PRIOR TO BEGINNING CONSTRUCTION TO MARK SIGNAL AND COMMUNICATION CABLES AND
CONDUITS. TO ASSURE CABLES AND CONDUITS HAVE BEEN MARKED, NO WORK MAY PROCEED UNTIL YOU HAVE BEEN PROVIDED
WITH AN SCRRA DIG NUMBER. IN CASE OF SIGNAL EMERGENCIES OR GRADE CROSSING PROBLEMS, THE CONTRACTOR SHALL
CALL SCRRA'S 24-HOUR SIGNAL EMERGENCY NUMBER 1-888-446-9721 CALL SCRRA'S 24-HOUR SIGNAL EMERGENCY NUMBER 1-888-446-9721.

27. BEFORE EXCAVATING, THE CONTRACTOR MUST DETERMINE WHETHER ANY UNDERGROUND PIPE LINES, ELECTRIC WIRES OR CABLES, INCLUDING FIBER OPTIC CABLE SYSTEMS, ARE PRESENT AND LOCATED WITHIN THE PROJECT WORK AREA BY CALLING THE SOUTHERN CALIFORNIA UNDERGROUND SERVICE ALERT AT 811.

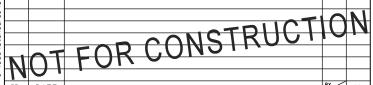
CONTACT SCRRA'S CONSULTANT/CONTRACTOR AT (714 788-1864 TO ARRANGE FOR FLAGGING SERVICES. FLAGGING SERVICE IS DEPENDENT ON THE EMPLOYEE-IN-CHARGE (EIC) AVAILABILITY AND MAY REQUIRE A MINIMUM OF FIFTEEN (15) WORKING DAYS PRIOR TO BEGINNING WORK, PRIOR NOTIFICATION OF FLAGGING SERVICES DOES NOT GUARANTEE THE AVAILABILITY OF THE EIC FOR THE PROPOSED DATE OF WORK.

29. CONTACT SCRRA AT 1-909-451-2885 TO ARRANGE FOR THIRD PARTY SAFETY TRAINING. ALLOW 24 TO 72 HOURS FROM THE REQUEST FOR SAFETY TRAINING TO ARRANGE THE TRAINING.

CONTRACTOR IS TO COMPLETE SCRRA'S TEMPORARY RIGHT OF ENTRY AGREEMENT, FORM 6. THIS FORM IS AVAILABLE ON SCRRA'S WEBSITE AT (www.metrolinktrains.com; About Us; Engineering & Construction).

TEMPORARY TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO SCRRA FOR COMMENTS AND APPROVAL NOT LESS THAN SIXTY (60) DAYS PRIOR TO START OF THE WORK. THE TEMPORARY TRAFFIC CONTROL PLANS SHALL BE PREPARED, SIGNED, AND SEALED BY A CALIFORNIA LICENSED CIVIL OR TRAFFIC ENGINEER. TEMPORARY TRAFFIC CONTROL WILL COMPLY WITH THE CURRENT EDITIONS OF THE CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD), WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH) TEMPORARY TRAFFIC CONTROL WORK AT OR NEAR GRADE CROSSING GUIDELINES PREPARED BY SCRRA, AND SCRRA'S ENGINEERING

10:09:15 AM USER = trandp 7951\4017951_0001\90_CAD M 48\SCRR\Standards\PenTable



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D. BARRAZA D. BARRAZA CHECKED B S. RUGGLES

A. SOKOL

01-20-2017

30% **SUBMITTAL**

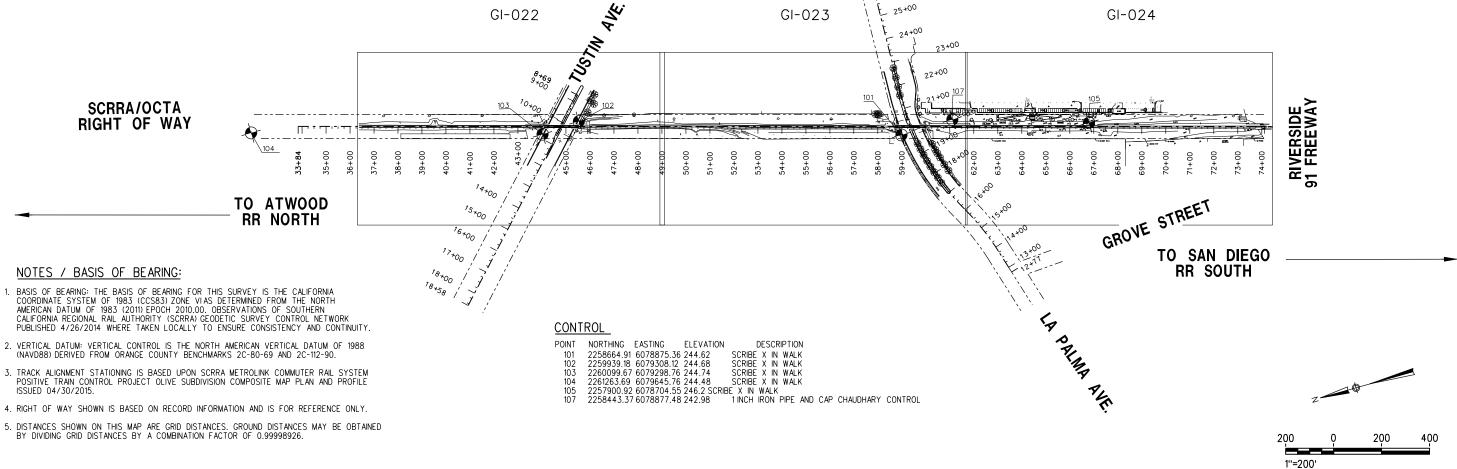


ANAHEIM CANYON METROLINK STATION PROJECT

ONTRACT NO. C-4-1977 DRAWING NO. GI-013 REVISION SHEET NO. 6 OF 71 SCALE

GENERAL NOTES

LEGEND AND ABREVIATIONS: POWER POLE= PP PALM TREE GUY ANCHOR= GA CONTROL POINT LIGHT POLE= LP MANHOLE= MH SIGN= SN FIRE HYDRANT= FH RAILROAD GATE= RR GTE INTERMEDIATE SIGNAL= INTER. SIG. TEST PIT= TP GAS VALVE= GV UTC= UTILITY VAULT COMMUNICATIONS WATER VALVE= WV UTE= UTILITY VAULT ELECTRIC TREE LS= LANDSCAPPED AC= ASPHALTIC CONCRETE Ø DIAMETER HC= HANDICAPPED BLDG= BUILDING



OT FOR CONSTRUCTION INFORMATION CONFIDENTIAL All plans, drowings, specifi-cations, and or information furnished herewith shall remain the property of the Keynologian Regional Rail Authority and Regional Rail Authority and shall be held confidential; and shall not be used for any purpose not provided for in agreements with the Southern California Regional Rail Authority.

J. CASANOVA J. CASANOVA

M. MILLER

01-20-2017

30% M. MILLER | SUBMITTAL



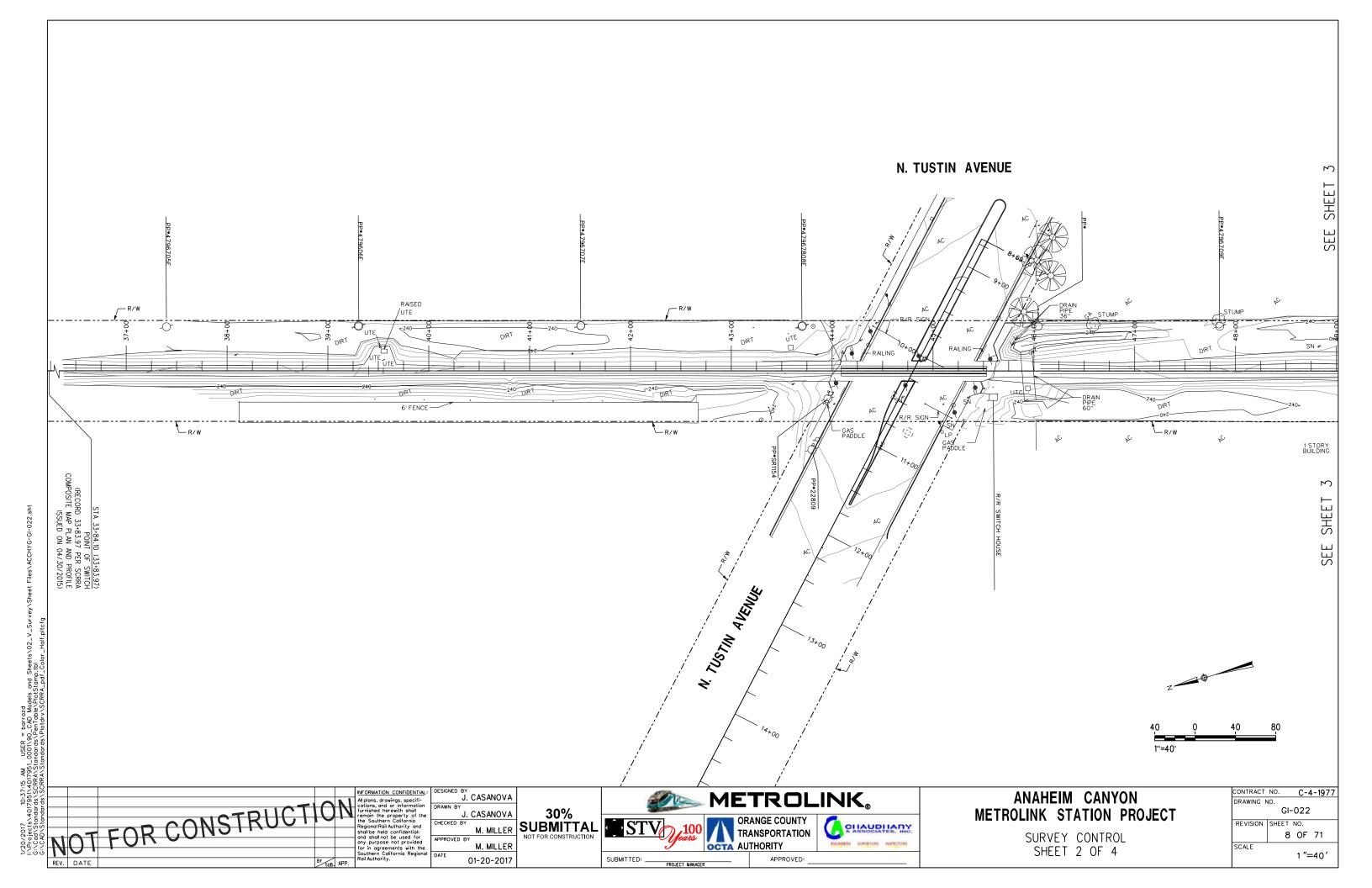


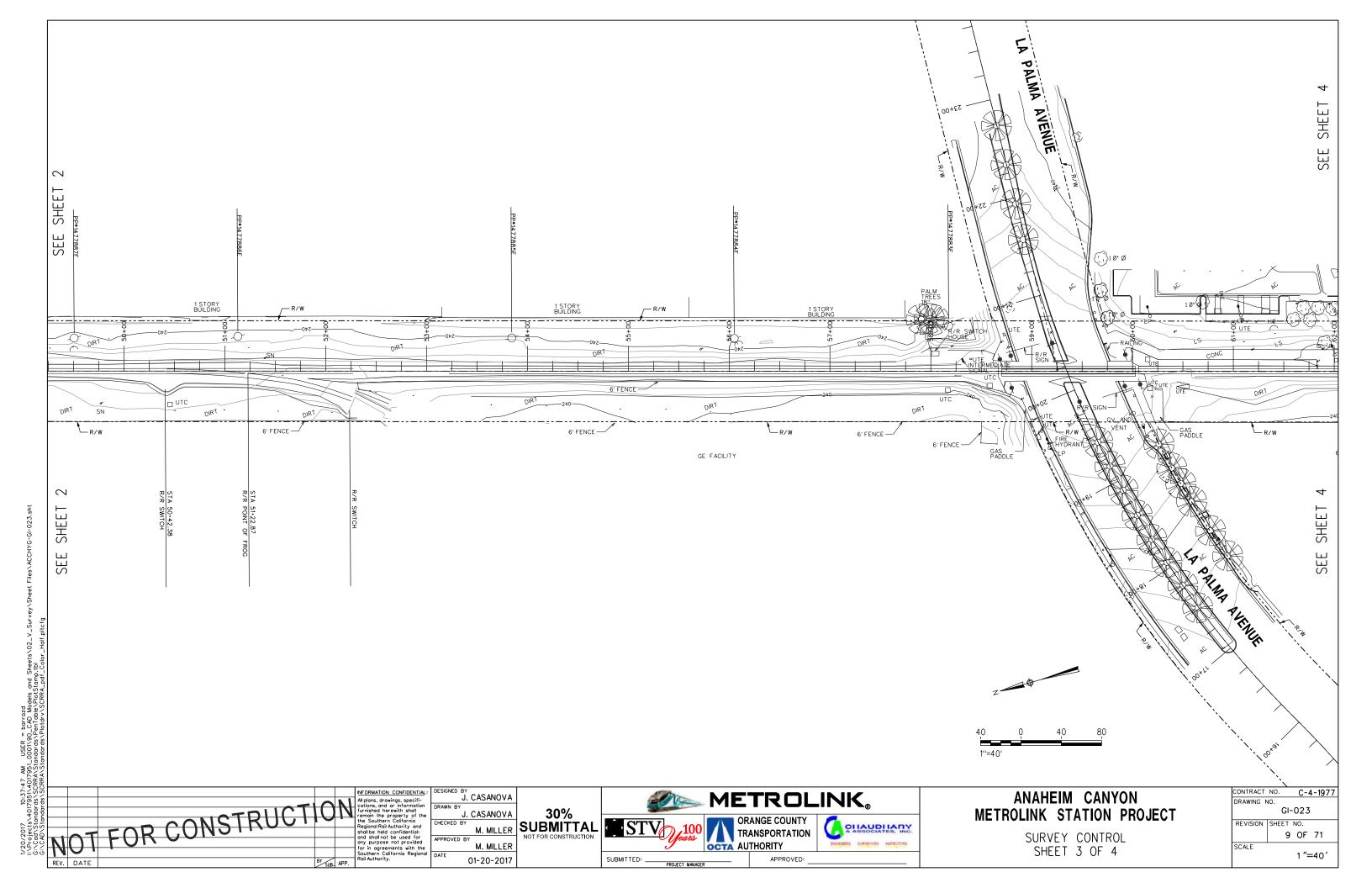
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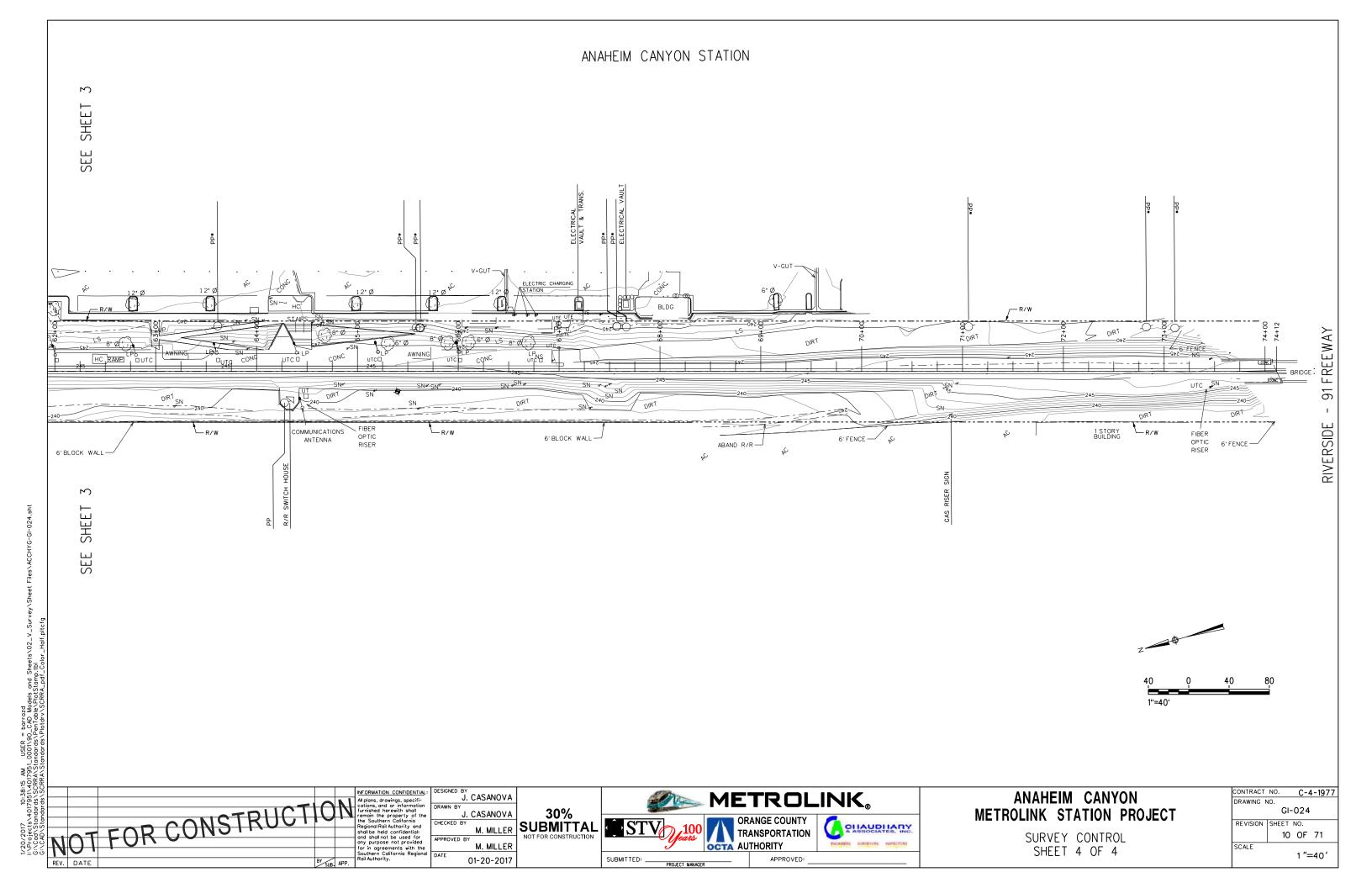
ANAHEIM CANYON METROLINK STATION PROJECT

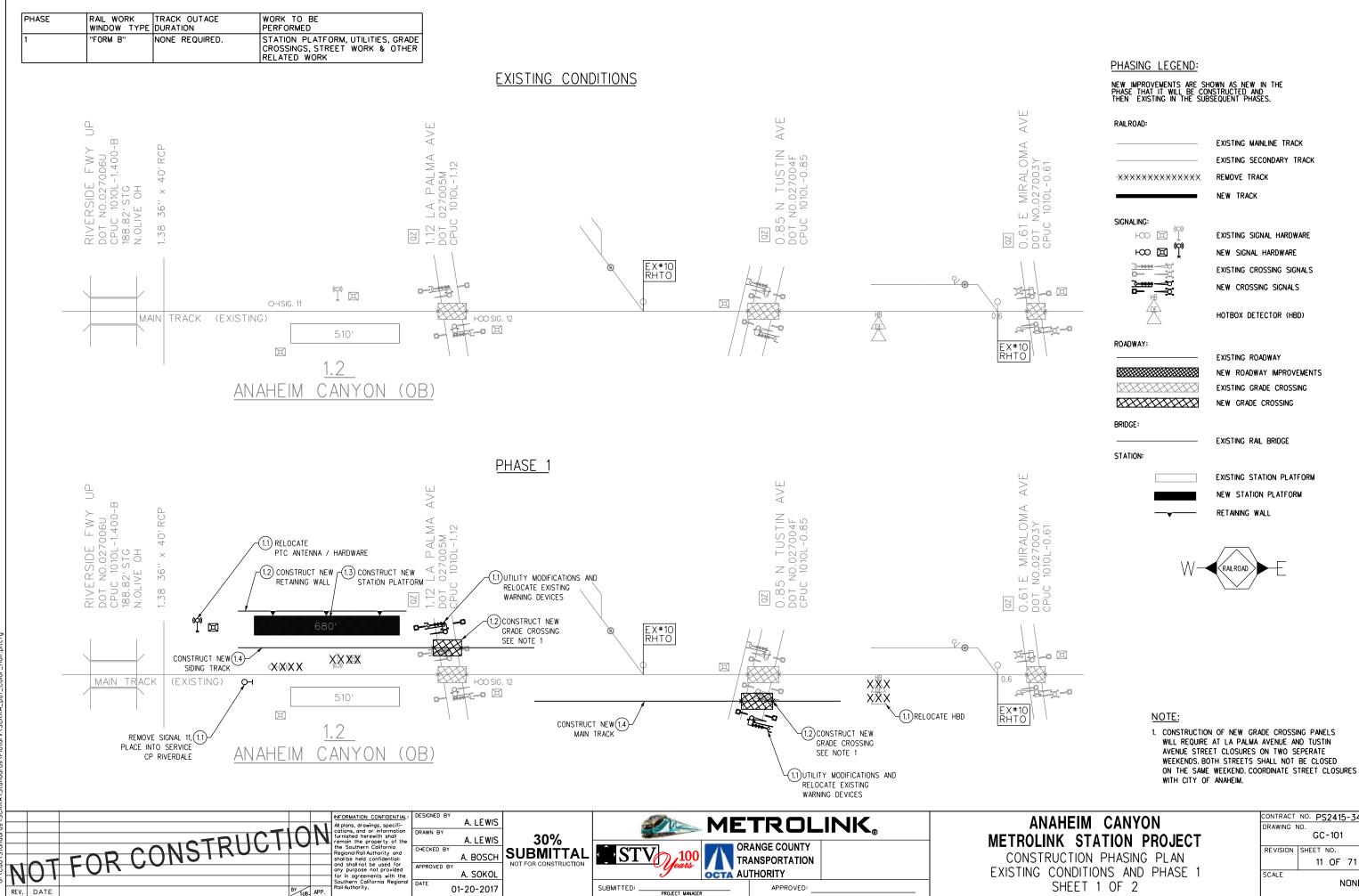
SURVEY CONTROL SHEET 1 OF 4

CONTRACT	NO.	C-4	1-1977
DRAWING N	10.		
	GI-	-021	
REVISION	SHEET	NO.	
	7	OF	71
SCALE		1 "=2	200′









OCTA AUTHORITY

SUBMITTED: __

A. BOSCH

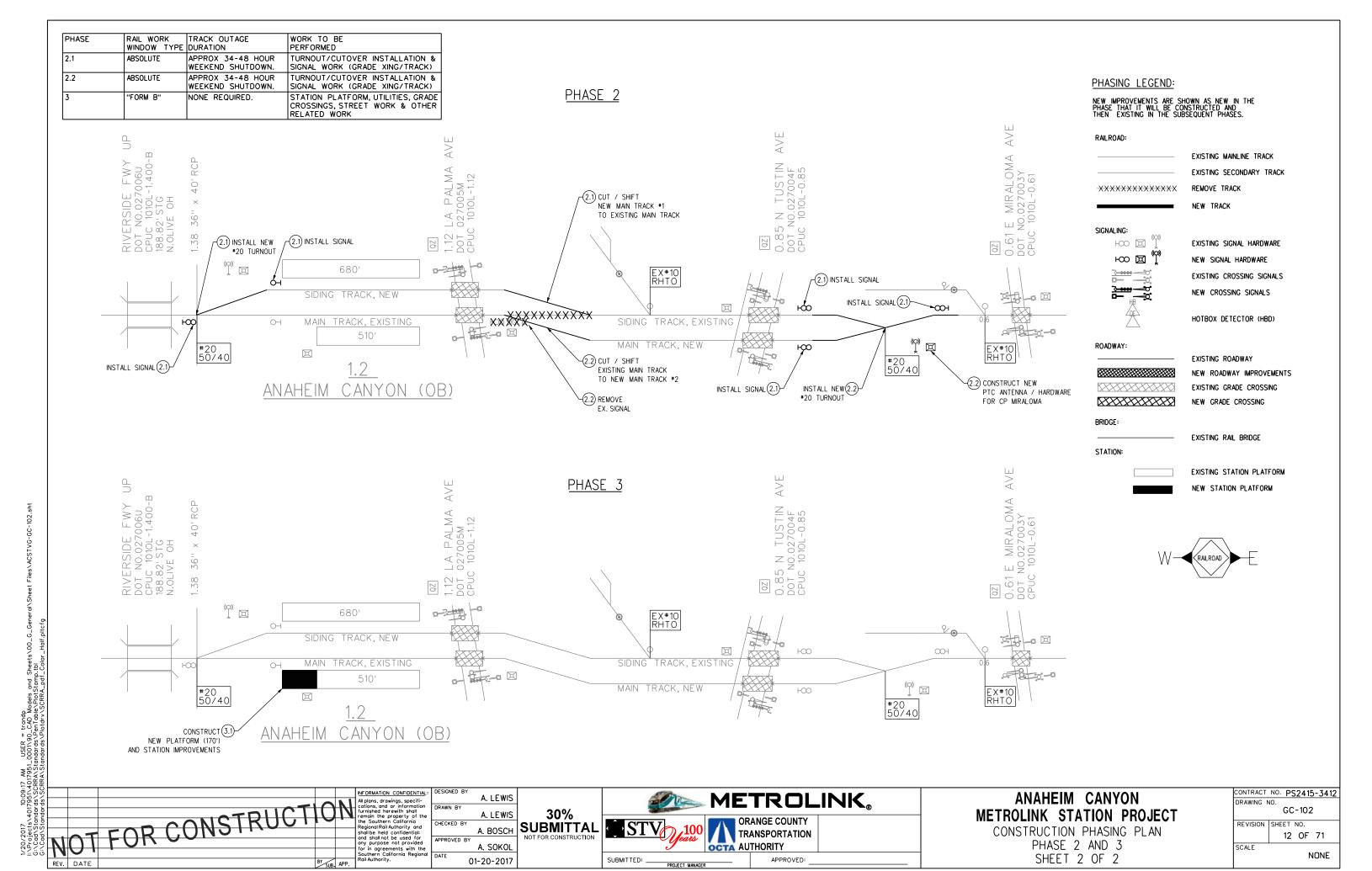
A. SOKOL

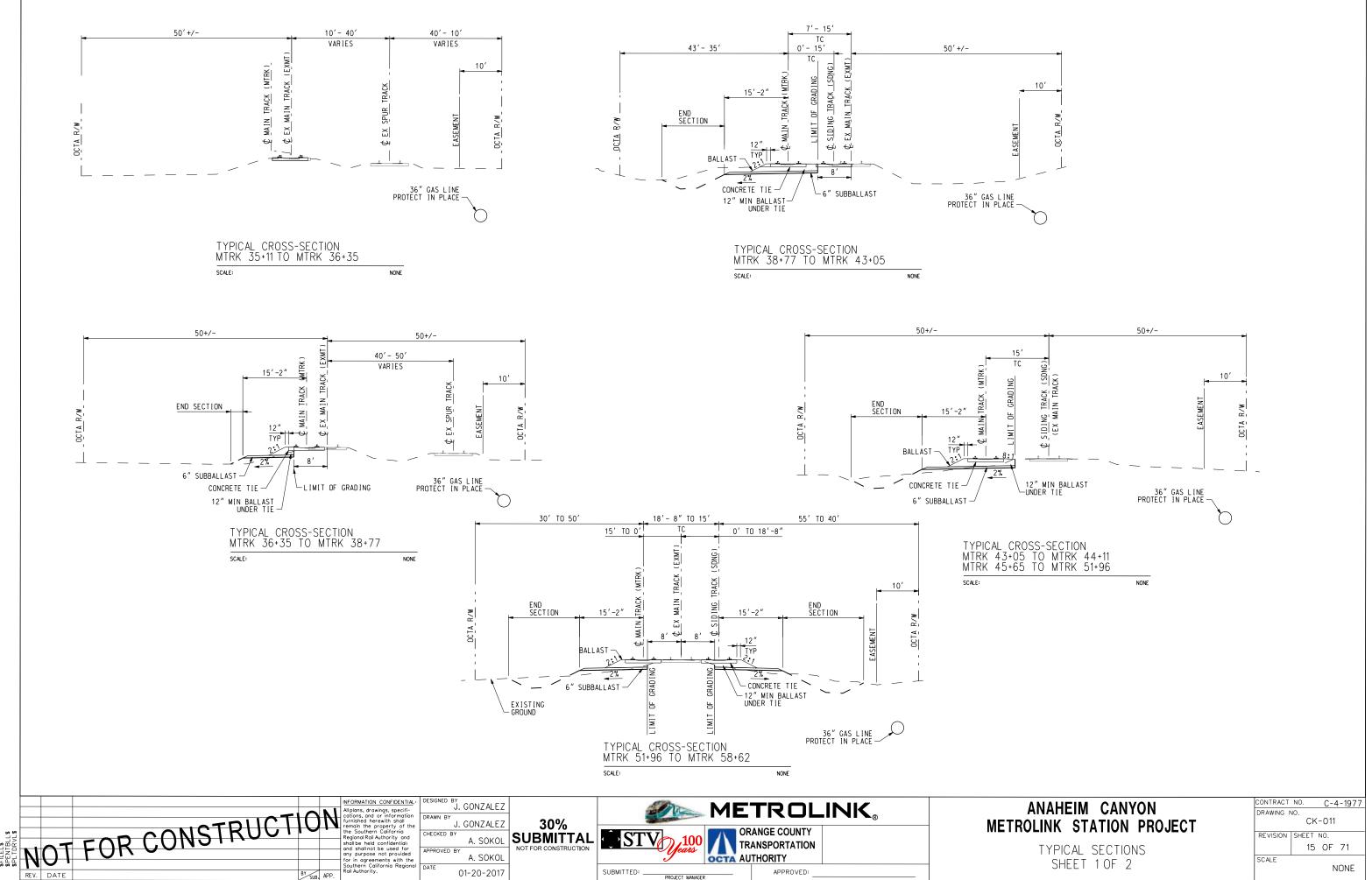
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CONSTRUCTION PHASING PLAN EXISTING CONDITIONS AND PHASE 1 SHEET 1 OF 2

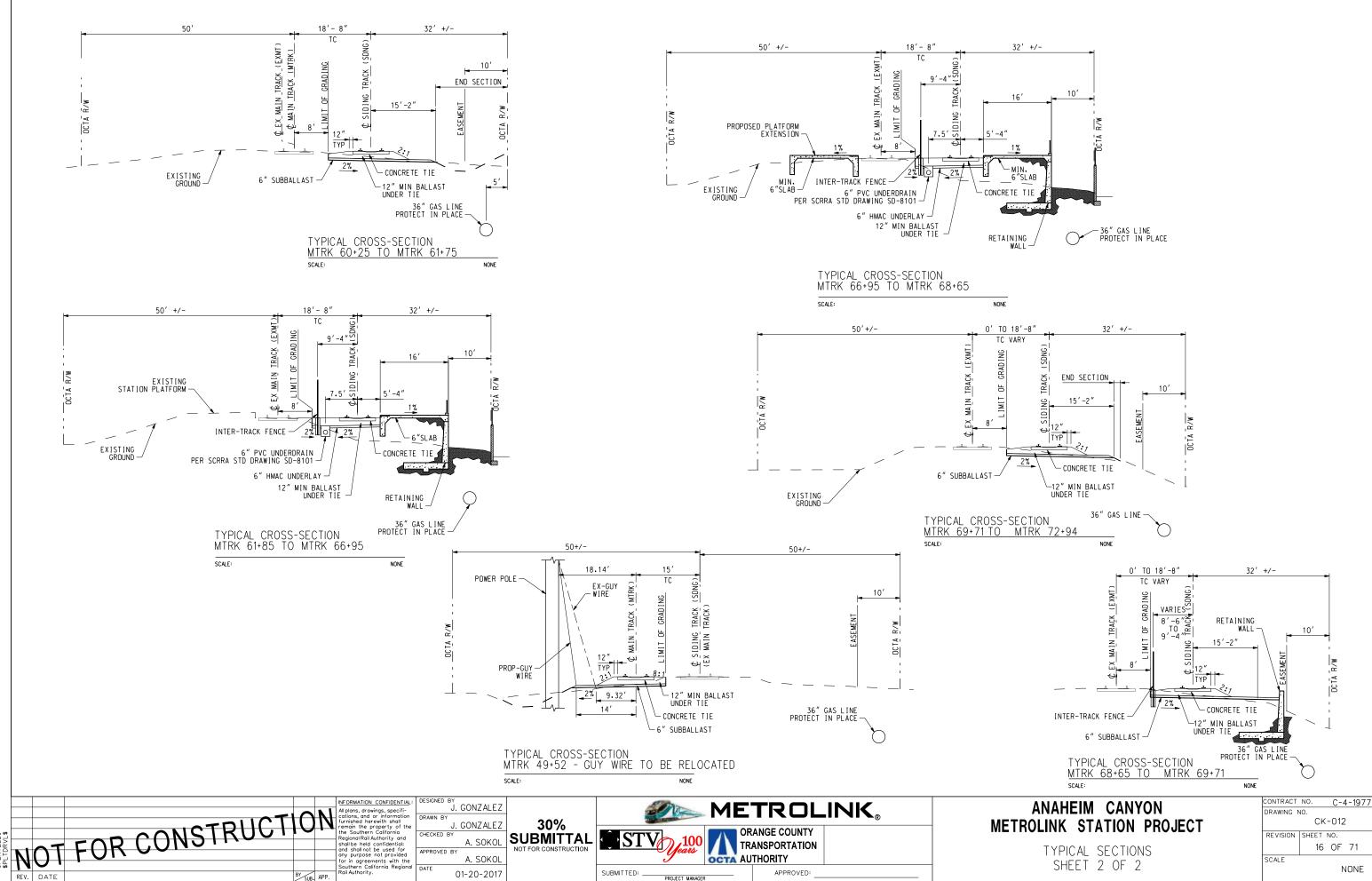
CONTRACT NO. PS2415-3412 REVISION SHEET NO. 11 OF 71 NONE





01-20-2017

SUBMITTED: __

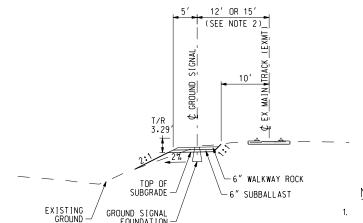


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01-20-2017

SHEET 2 OF 2

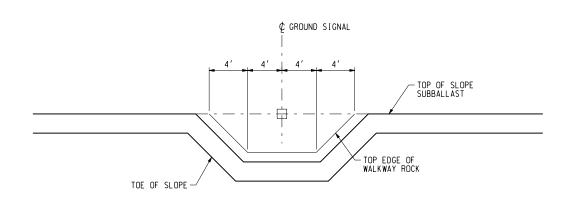
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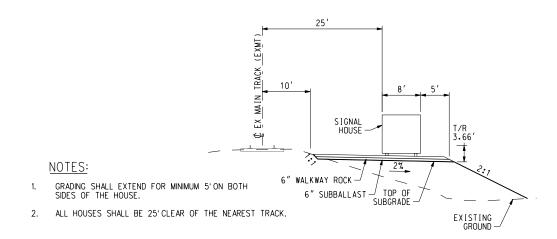
NOTES:

- . GRADING SHALL EXTEND FOR MINIMUM 4'ON BOTH SIDES OF THE EXTENTS OF MAST AND LADDER.
- SEE TRACK PLAN AND PROFILE DRAWINGS FOR SIGNAL OFFSET DISTANCE FROM CENTERLINE OF TRACK.

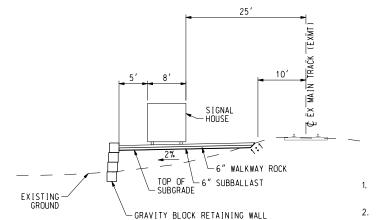




SIGNAL BERM DETAIL CK-013







NOTES:

- GRADING SHALL EXTEND FOR MINIMUM 5'ON BOTH SIDES OF THE SIDES OF THE HOUSE.
- 2. ALL HOUSES SHALL BE 25'CLEAR OF THE NEAREST TRACK.

CROSS SECTION RETAINED SIGNAL HOUSE

N.T.S

CK-013



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30% SUBMITTAL NOT FOR CONSTRUCTION

J. GONZALEZ

J. GONZALEZ

A. SOKOL

A. SOKOL

01-20-2017



ANAHEIM CANYON METROLINK STATION PROJECT

RAILROAD SIGNAL GRADING DETAILS

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DRAWING 1	١٥.						
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REVISION	SHEET	Γ	NC).			
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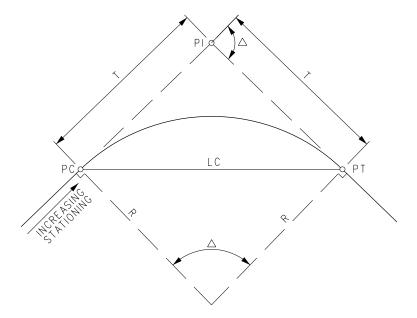
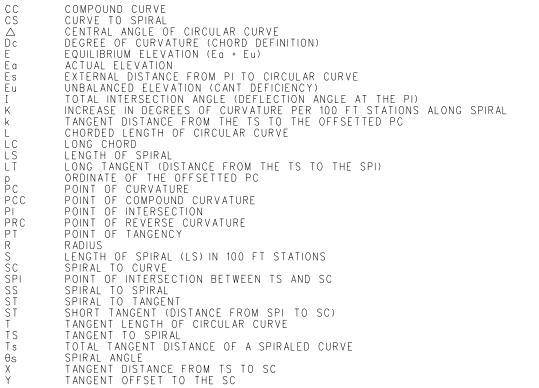


FIGURE B SIMPLE CIRCULAR CURVE

ABBREVIATIONS AND SYMBOLS



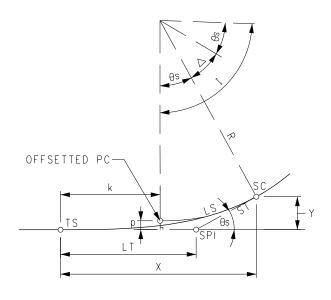


FIGURE C TRANSITION CURVE

KEY FORMULAE

$R = \frac{50'}{SIN(\frac{Dc}{2})}$	Ts =	(R+p)TAN(^I / ₂)+k
$\triangle = I - 2\theta s$	Es =	$(R+p)EX SEC(\frac{1}{2})+p$
$L = \frac{\triangle}{Dc} \times 100$	χ =	1 - 0.003048θs
$T = R TAN(\frac{\triangle}{2})$	Υ =	0.5820sS - 0.000012646
$LC = 2R SIN(\frac{\triangle}{2})$	k =	$\frac{LS}{2}$ - 0.000508 Δ^2 S
$LS = \frac{200\theta s}{Dc}$	p =	0.1454 △ S
$S = \frac{LS}{100}$		
$\theta_{S} = \frac{LS Dc}{200}$		
$K = \frac{100 Dc}{LS}$		
$LT = X - \frac{Y}{TAN\Thetas}$		
$ST = \frac{Y}{SIN \theta s}$		

NOTES:

- 1. CIRCULAR CURVES ARE DEFINED BY THE CHORD DEFINITION (CENTRAL ANGLE SUBTENDED BY A CHORD OF 100 FEET) OF CURVATURE AND SPECIFIED BY DEGREE.

 2. SPIRALS ARE DEFINED BY THE CLOTHOID DEFINITION. AUTHORIZATION FROM SCRRA
- SHALL BE OBTAINED IF ANY DIFFERENT METHOD OR PARAMETERS ARE UTILIZED FOR SPIRAL TRANSITION CURVES. THE REQUEST SHALL BE FULLY DOCUMENTED WITH DESIGN DATA, CALCULATIONS AND OTHER PERTINENT INFORMATION.

 THE TRACK GEOMETRY DATA TABLE, SHOWN IN ES2202-2, SHALL BE COMPLETED
- AND SUBMITTED TO SCRRA FOR REVIEW, COMMENT AND APPROVAL FOR ALL CURVES.
- 4. ALL ANGLES ARE IN DEGREES, DISTANCES AND LENGTHS ARE IN FEET, EXCEPT SUPERELEVATIONS ARE IN INCHES AND SPEEDS ARE IN MILES PER HOUR (MPH).



01-20-2017





ANAHEIM CANYON METROLINK STATION PROJECT

CONTRACT NO. C-4-1977 DRAWING NO. CK-020 REVISION SHEET NO. 18 OF 71 NONE

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A. BOSCH SUBMITTAL

HORIZONTAL CURVE GEOMETRY

								PROP	OSED	SID	ING 7	RACI	K GEOM	ETRY	TABLE										
		ST	ATION	ING DA	ΛTΑ				INP	UT D	ΔТД			(CURVE	DATA				SP	IRAL	DATA	Д		
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc	Ea	Eu	V(PAS)	V(F LT)	LS	I	RADIUS	Δ	L	T	θ	Х	Y	Р	K	LT	ST	Ts
NO.	DESC	DEARING	DISTANCE	STATION	NURTHING	EASTING	degrees	inches	inches	mph	mph	feet	degrees	feet	degrees	feet	feet	degrees	feet	feet	feet	feet	feet	feet	feet
#20 T0	PS/POB	S14°45′30″W	72.33	38+03.95	2260665.875	6079503.987																			
#20 10	PITO	S17°37′21″W	216.74	38+76.28	2260595.928	6079485.561																			
	TS	311 31 21 1	40.00	40+93.02	2260389.361	6079419.945																			
	SC		40.00	41+33.02	2260351.228	6079407.868						40.00						0°09′00″	40.00	0.03	0.01	20.00	26.67	13.33	106.39
0.73-2	PI					6079387.933	0° 45′ 00″	1/2"	0.56"	45	40		1°17′45″	7639.44	0°59′45″	132.79	132.79								
	CS		40.00	42+65.81		6079369.102																			
	ST	S16°19′36″W	0.00	43+05.81	2260185.849	6079357.824						40.00						0°09′00″	40.00	0.03	0.01	20.00	26.67	13.33	106.40
	POE	310 13 30 11	0.00																						
	POB	S16°19′38″W	0.00																						
	TS	310 13 30 11	50.00	51+46.71	2259378.856	6079121.435												0°13′45″	50.00	0.07	0.02	25.00	33.33	16.67	160.16
	SC		30.00	51+96.71	2259330.891	6079107.315						50.00													
1.02-2	PI					6079075.925	0°55′00″	1/2"	3.50"	79	40		2°28′40″	6250.52	2°01′10″	220,29	110.16								
	CS		50.00	54+16.99	2259120.884	6079040.834												0°13′45″	50.00	0.07	0.02	25.00	33.33	16.67	160.17
	ST	S18°51′17″W	119.07	54+66.99	2259073.532	6079024.779						50.00													
	TS	310 31 11 1	50.00	55+85.99	2258960.884	6078986.420												0°13′45″	50.00	0.07	0.02	25.00	33.33	16.67	159.36
	SC		30.00	56+35.99	2258913.531	6078970.366						50.00													
1.10-2	PI				2258809.869	6078935.528	0°55′00″	1/2"	3.50"	79	40		2°27′47″	6250.52	2°00′17"	218.70	109.36								
	CS		50.00	58+54.69	2258705.052	6078904.338												0°13′45″	50.00	0.07	0.02	25.00	33.33	16.67	159.36
	ST	S16°20′31″W	924.33	59+04.69	2258657.091	6078890.206						50.00													
	TS	310 20 31 W	40.00	68+29.02	2257770.098	6078630.126																			
	SC		40.00	68+69.02	2257731.688	6078618.961						40.00						0°24′00″	40.00	0.09	0.02	20.00	26.67	13.33	92.22
1.39-2	PI				2257681.484	6078604.620	2°00′00″	1/2"	2.34"	45	40		2°53′17″	2864.79	2°05′18″	104.41	104.41								
	CS		40.00	69+73.45	2257630.790	6078592.118																			
	ST	S13°27′13″W		70+13.45	2257591.909	6078582.721						40.00						0°24′00″	40.00	0.09	0.02	20.00	26.67	13.33	92.22
#20 T	PITO		280.84	72+94.29	2257318.782	6078517.383																			
#20 II	PS/POE	S16°19′04″W	61.04	73+55.33	2257260.201	6078500.232																			

NOT FOR CONSTRUCTION

INFORMATION CONFIDENTIAL:

J. GONZALEZ J. GONZALEZ A. SOKOL

01-20-2017

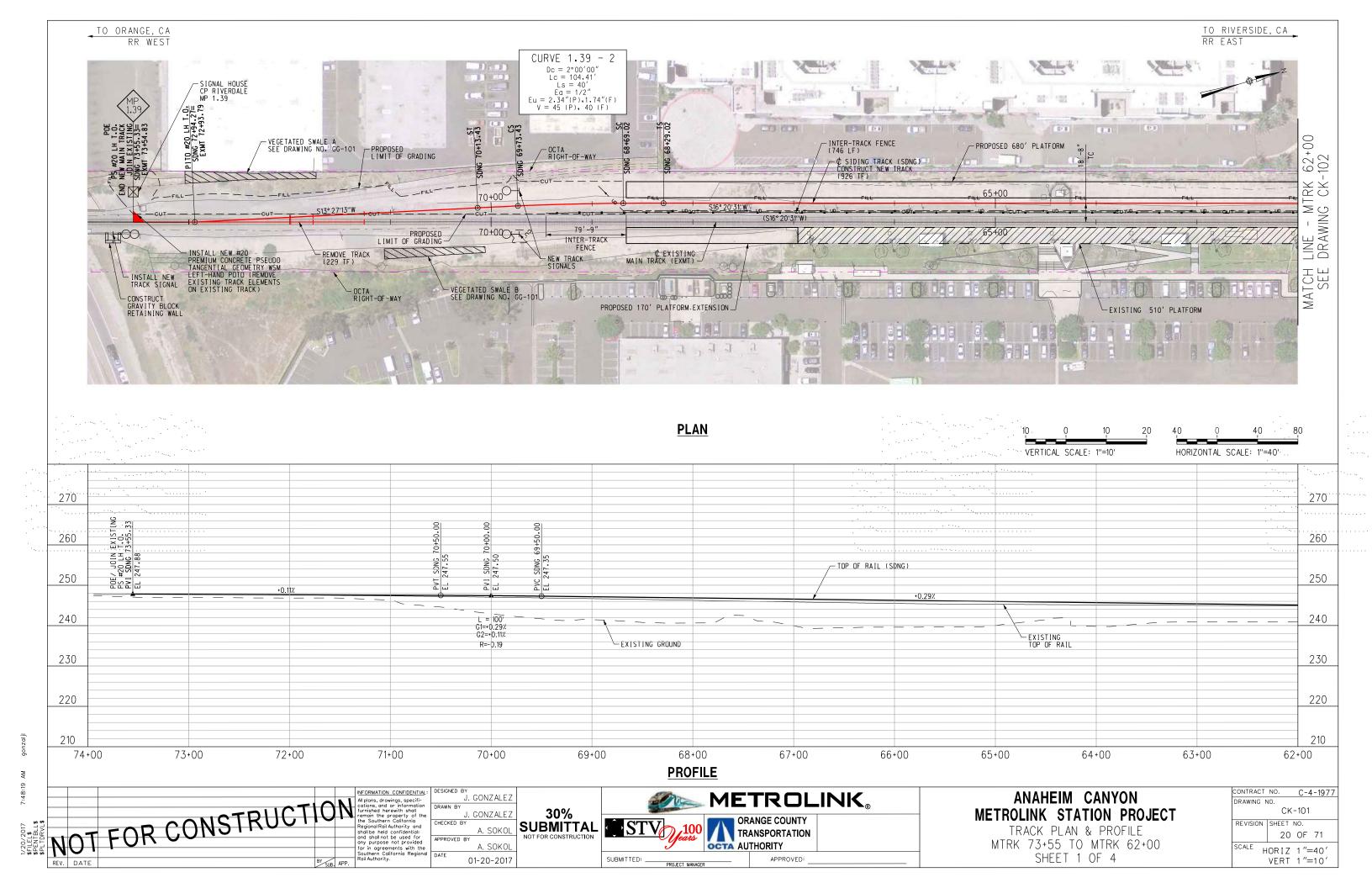
30% A. BOSCH SUBMITTAL

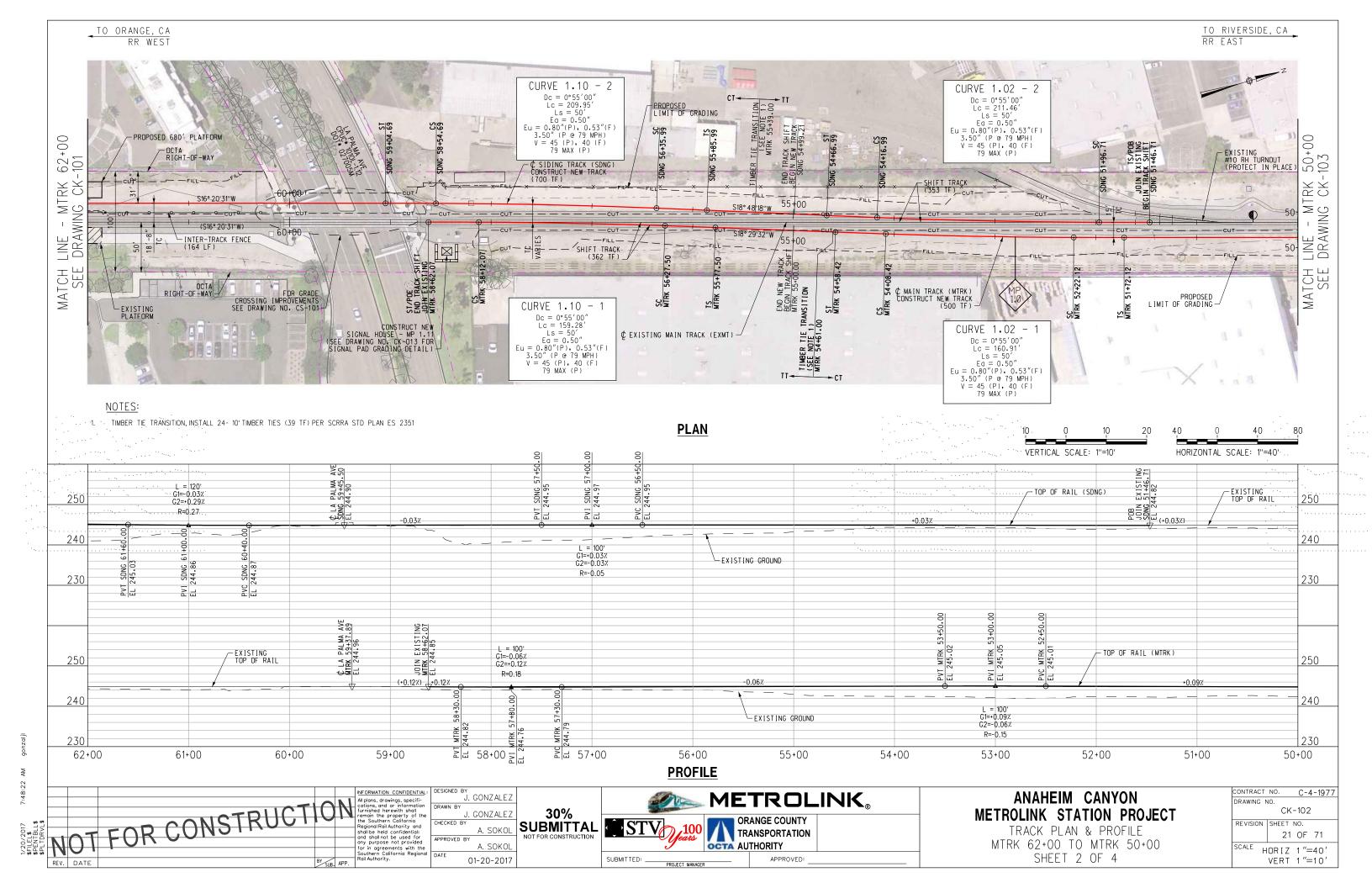


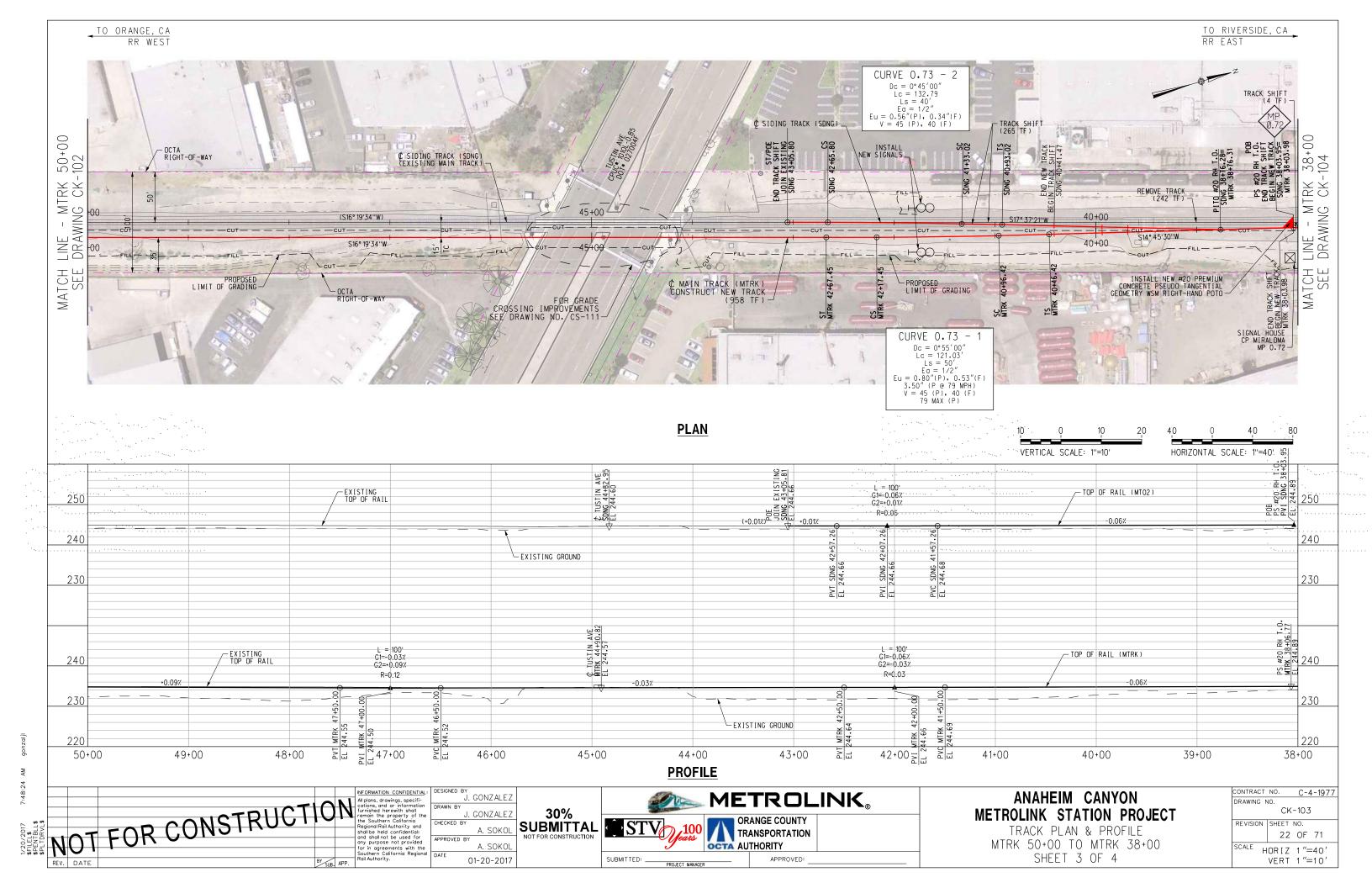
ANAHEIM CANYON METROLINK STATION PROJECT

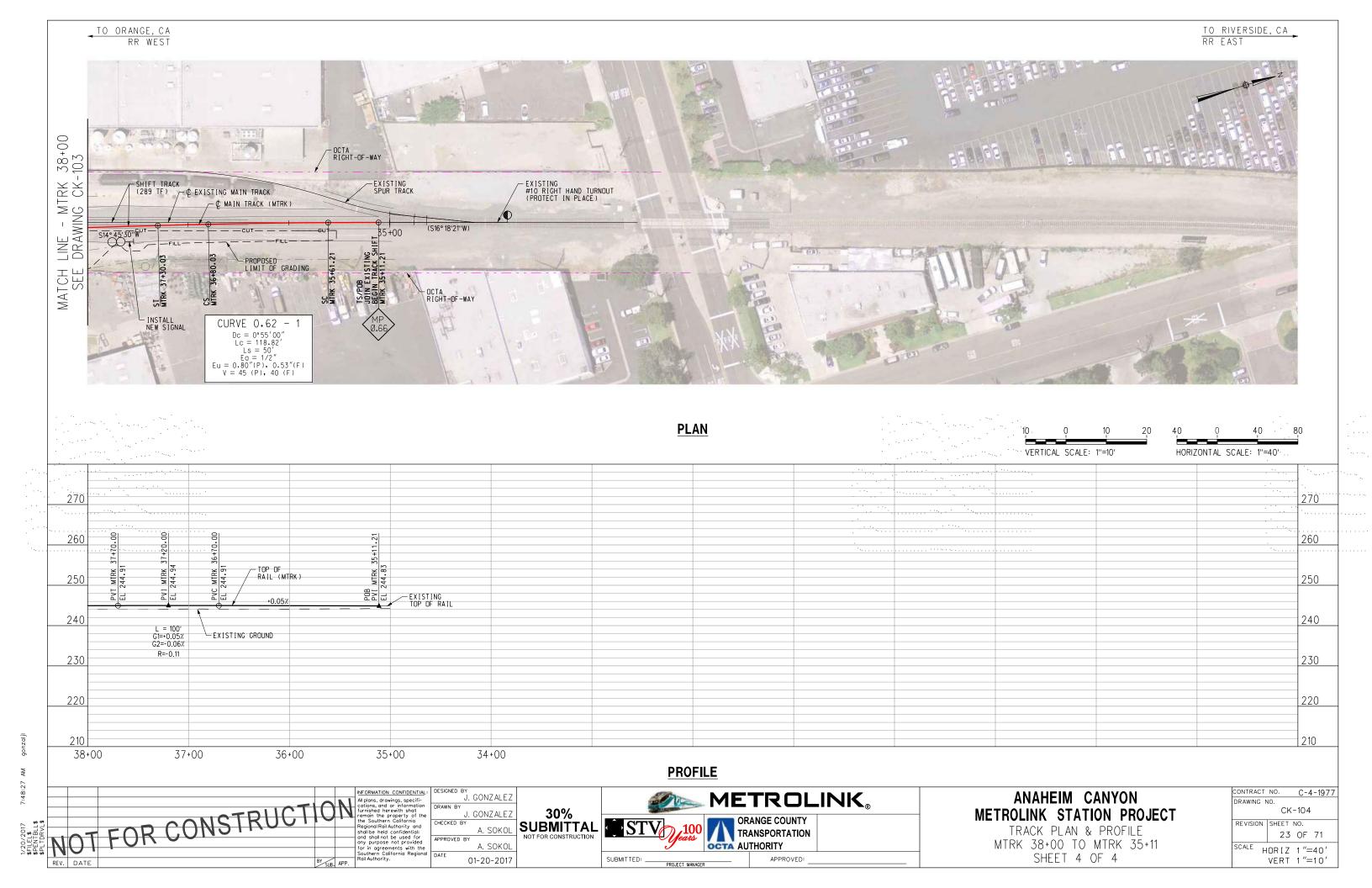
CONTRACT NO. C-4-1977 DRAWING NO. CK-021 REVISION SHEET NO. 19 OF 71 NONE

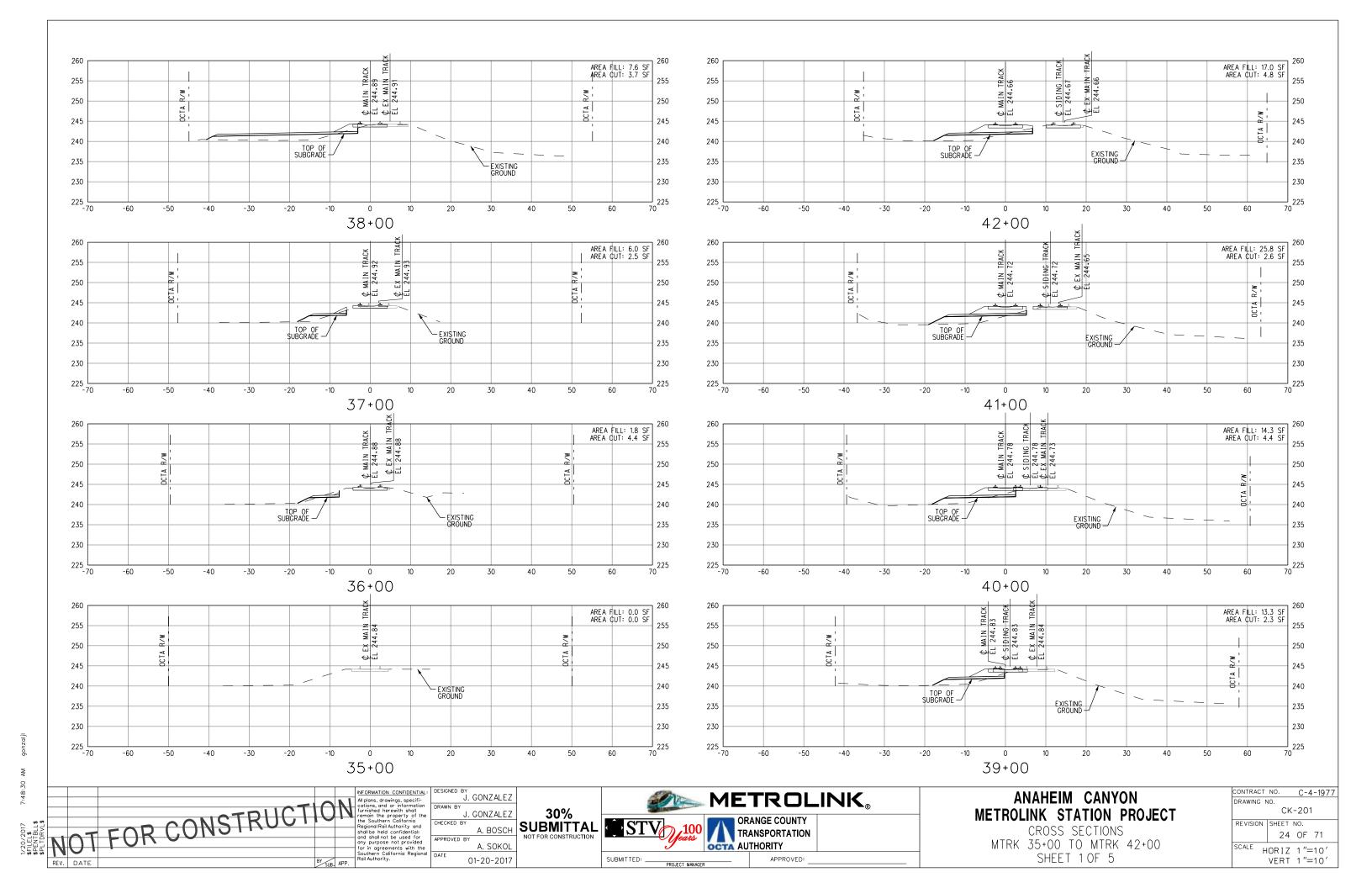
GEOMETRY TABLES

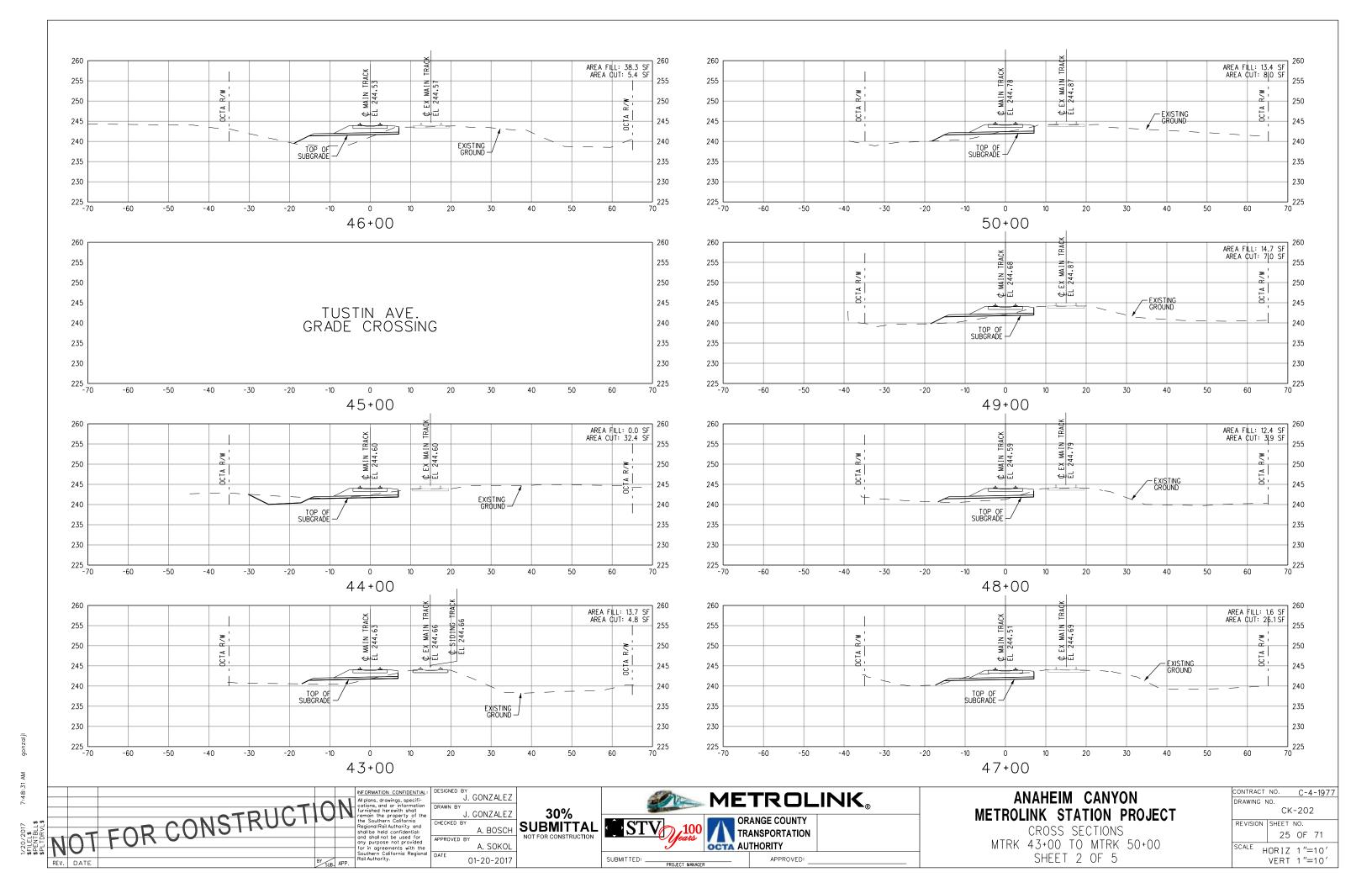


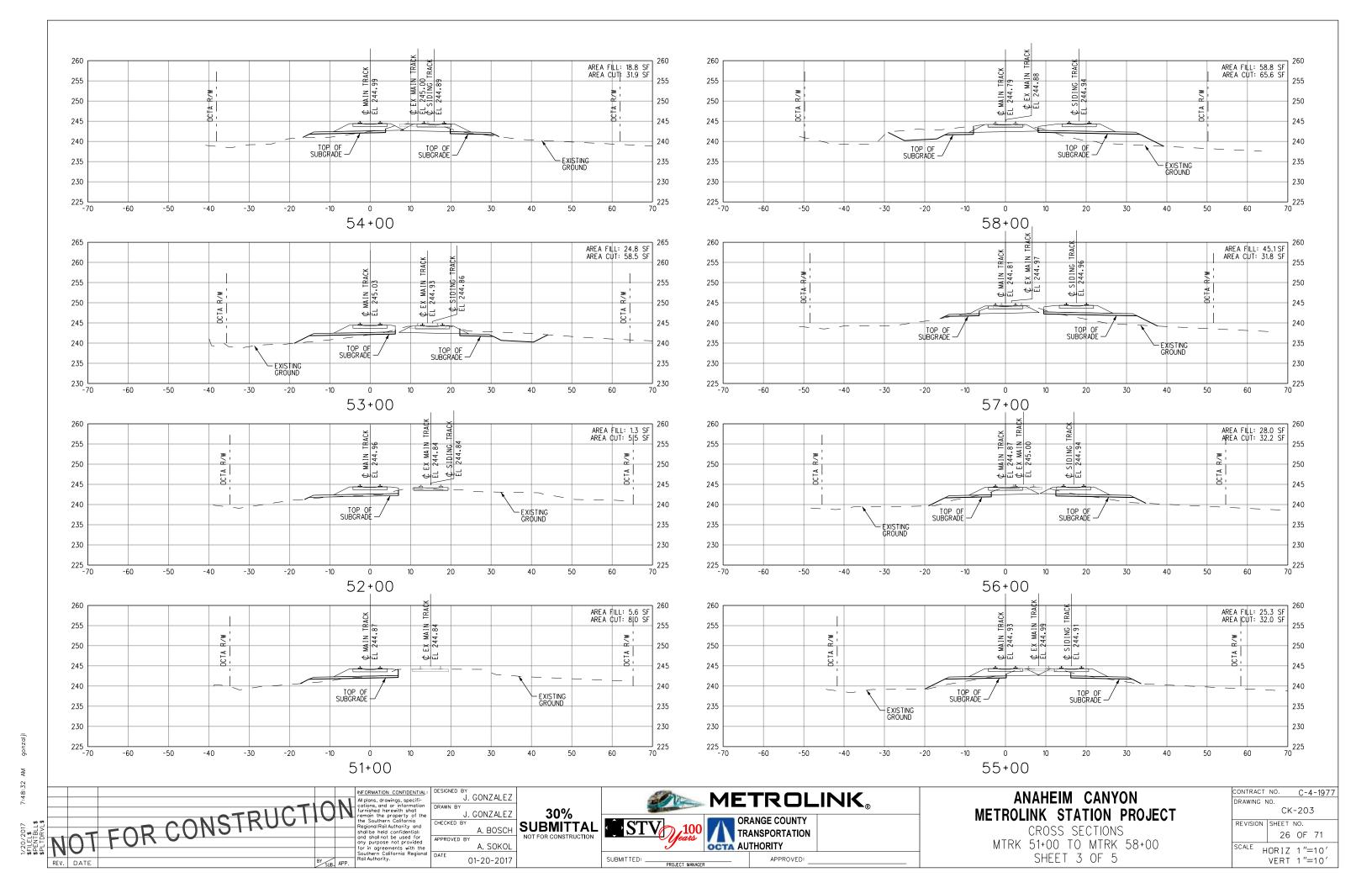


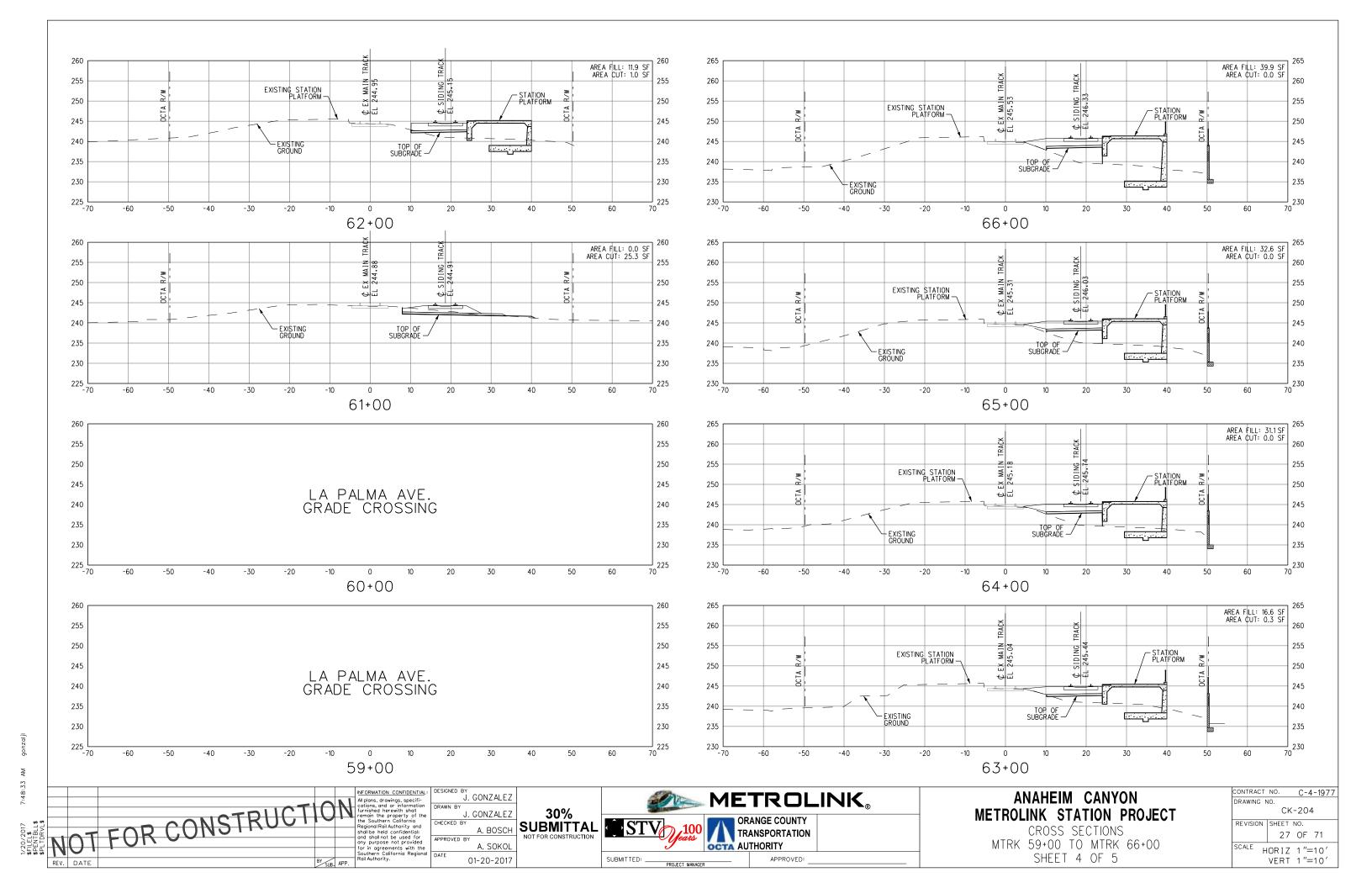


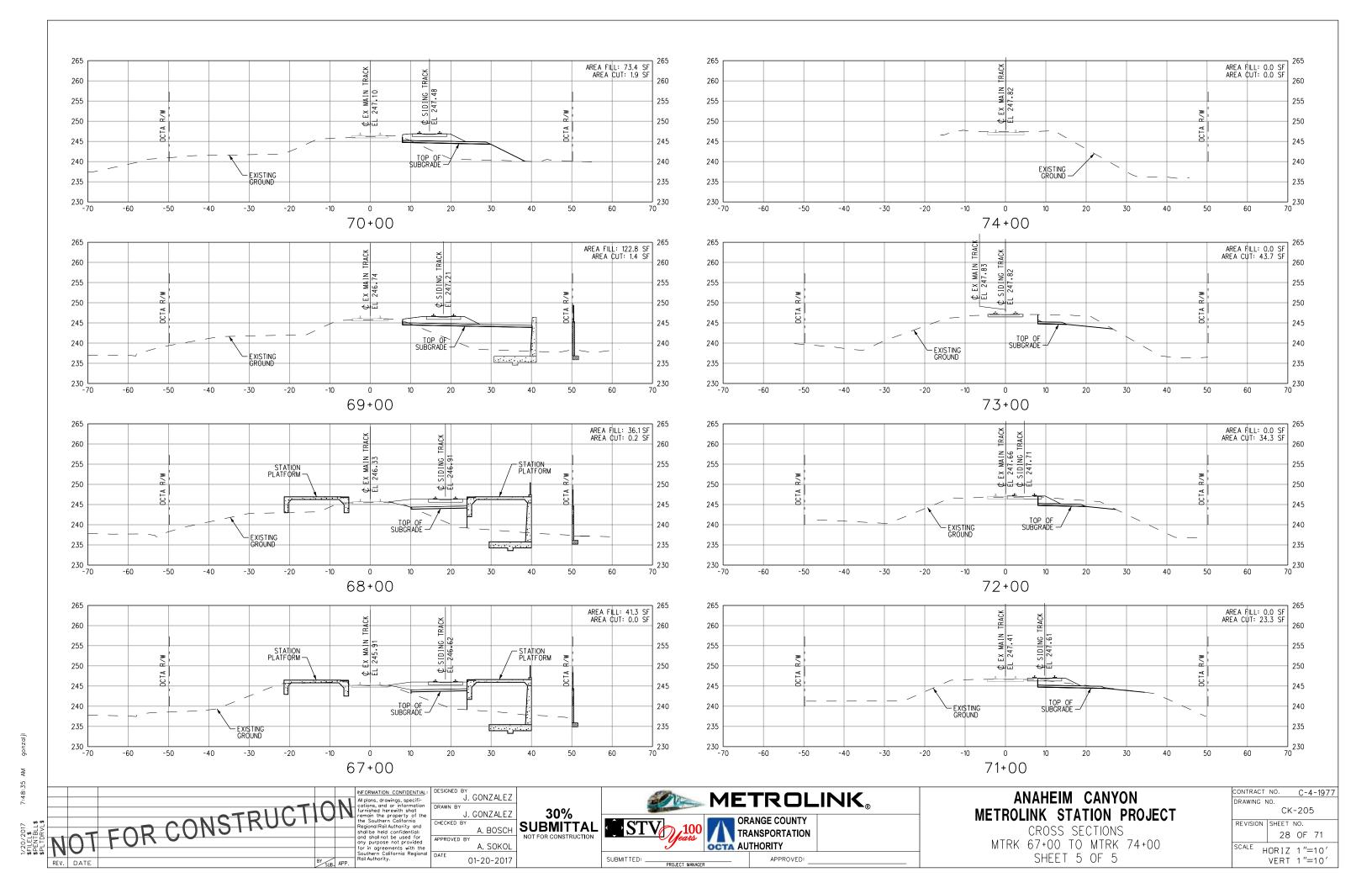


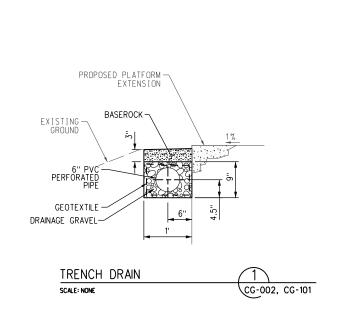


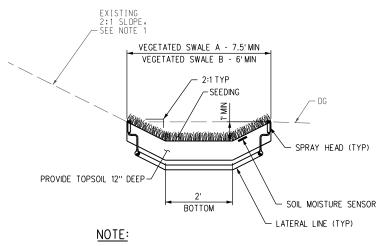






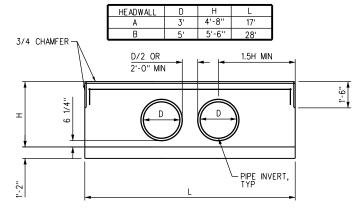






EXISTING GROUND SHOWN ADJACENT TO VEGETATED SWALE B; MIRROR FOR VEGETATED SWALE A.

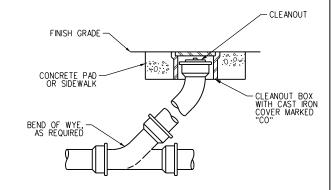
VEGETATED SWALE CG-003, CG-101 SCALE: NONE



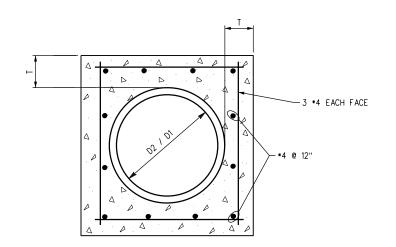
NOTE:

1. SEE 2016 CALTRANS REVISED STD PLANS RSP DETAIL D89.

DOUBLE PIPE CULVERT HEADWALL CG-103 SCALE: NONE

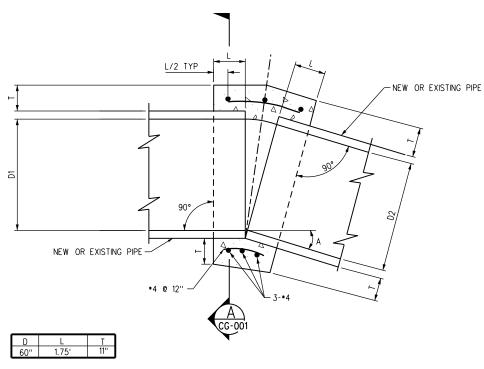


CLEANOUT CG-102

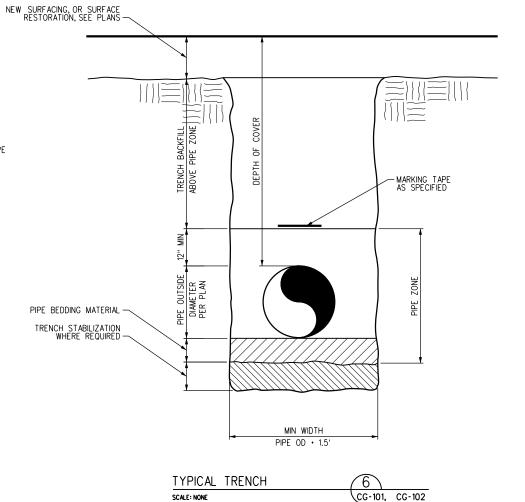


SECTION A-A

- FOR PIPE SIZE NOT LISTED USE NEXT SIZE LARGER.
- OMIT REINFORCING ON PIPES 24" AND LESS IN DIAMETER AND ON ALL PIPES WHERE ANGLE A IS LESS THAN 10° $\,$



CG-103



ANAHEIM CANYON METROLINK STATION PROJECT

DRAWING NO. CG-001 REVISION SHEET NO. 29 OF 71 SHEET 1 OF 2 NONE

CONTRACT NO.

C-4-1977



- WHERE PIPES OF DIFFERENT DIAMETERS ARE JOINED WITH A CONCRETE COLLAR, 'L' AND 'T' SHALL BE THOSE OF THE LARGER PIPE. D = D1 OR D2, WHICHEVER IS GREATER.

- 4. JOIN PIPES AT INVERTS.
- REINFORCEMENT SHALL BE PLACED 1 1/2" CLEAR FROM OUTSIDE DIAMETER OF PIPE.



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T. KIRKENDALL T. KIRKENDALI M. COQUIA M. COQUIA

01-20-2017

SCALE: NONE

CONCRETE COLLAR

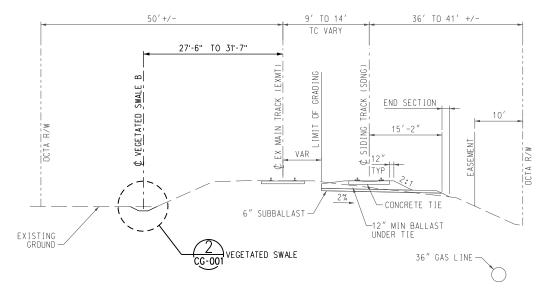
30% SUBMITTAL



DRAINAGE DETAILS

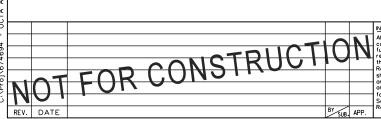
SCALE: NONE

0' TO 6' 40' TO 45' +/-TC VARY 44' TO 50' +/-50'+/-END SECTION **₾** VĒGĒTĀTĒD SWALĒ MIN VEGETATED SWALE EASEMENT 2% CONCRETE TIE-EXISTING GROUND └-6″ SUBBALLAST —12" MIN BALLAST UNDER TIE 36" GAS LINE PROTECT IN PLACE TYPICAL CROSS-SECTION MTRK 71-74 TO MTRK 73+04 VEGETATED SWALE A



TYPICAL CROSS-SECTION MTRK 70+06 TO MTRK 71+06 VEGETATED SWALE B

SCALE:NONE



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and shall not be used for
any purpose not provided
for in agreements with the
Southern California Regional
Rail Authority.

T. KIRKENDALL T. KIRKENDALL M. COQUIA

01-20-2017

M. COQUIA

M. COQUIA

M. TOUR SUBMITTAL

NOT FOR CONSTRUCTION





SCALE:NONE

ANAHEIM CANYON METROLINK STATION PROJECT

DRAINAGE DETAILS SHEET 2 OF 2

CONTRACT NO. C-4-1977 DRAWING NO. CG-002 REVISION SHEET NO. 30 OF 71 SCALE NONE

CONSTRUCTION NOTES: 1 CONSTRUCT VEGETATED SWALE PER DETAIL 2 ON DWG CG-001. CONSTRUCT REMODEL EXISTING REMOVE & RECONSTRUCT 2 CONSTRUCT TRENCH DRAIN PER DETAIL 1 ON DWG CG-001.

(15) CONSTRUCT 10" PVC SD, SEE RETAINING WALL DRAWINGS. INSTALL CLEANOUTS EVERY 300 PER DETAIL 4 ON DWG CG-001.

(19) CONSTRUCT 6" UD, SEE TRACK DRAWINGS. CONNECT TO 10" PVC SD PER PLANS.

8 INSTALL 10" PVC SD WITH TYPICAL TRENCH PER DETAIL 6 ON DWG CG-001.

(20) INSTALL 2" PVC W.

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REV.	DATE		BY SUB.	APP.

NFORMATION CONFIDENTIAL

DESIGNED BY
T. KIRKENDALL T. KIRKENDALL M. COQUIA

01-20-2017

M. COQUIA

SUBMITTAL

NOT FOR CONSTRUCTION



SUBMITTED: _

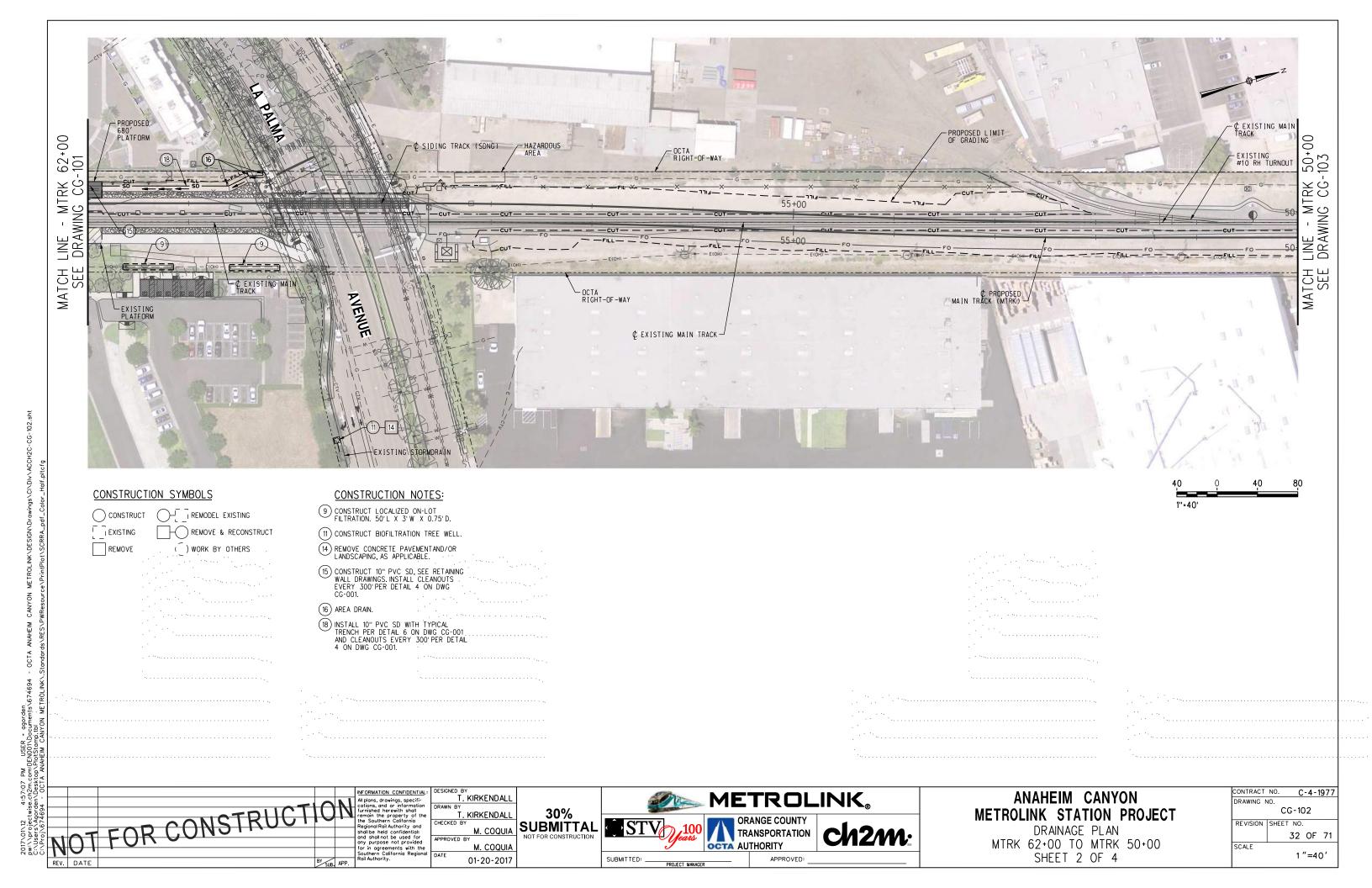


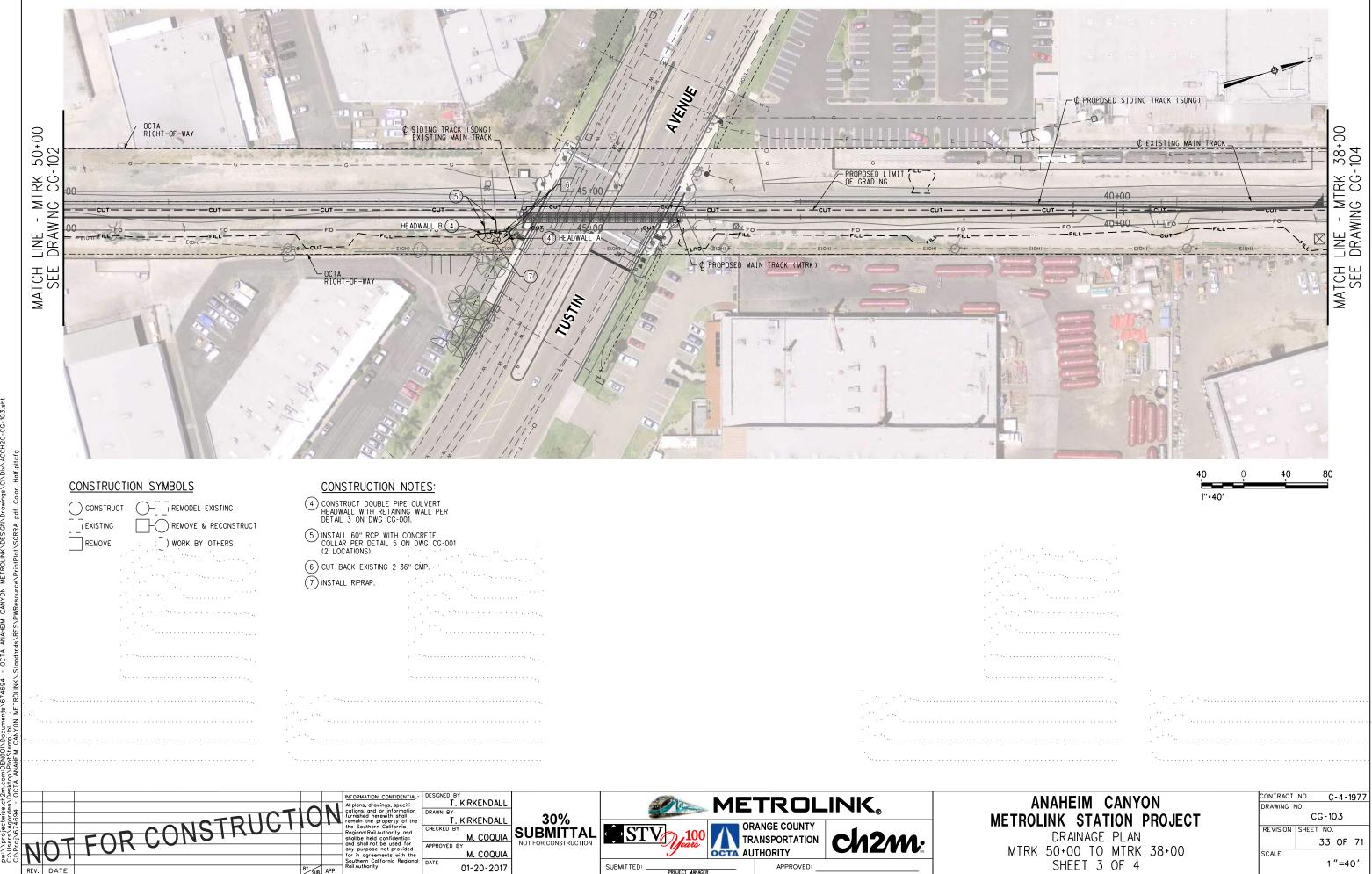
ANAHEIM CANYON METROLINK STATION PROJECT

DRAINAGE PLAN MTRK 73+55 TO MTRK 62+00 SHEET 1 OF 4

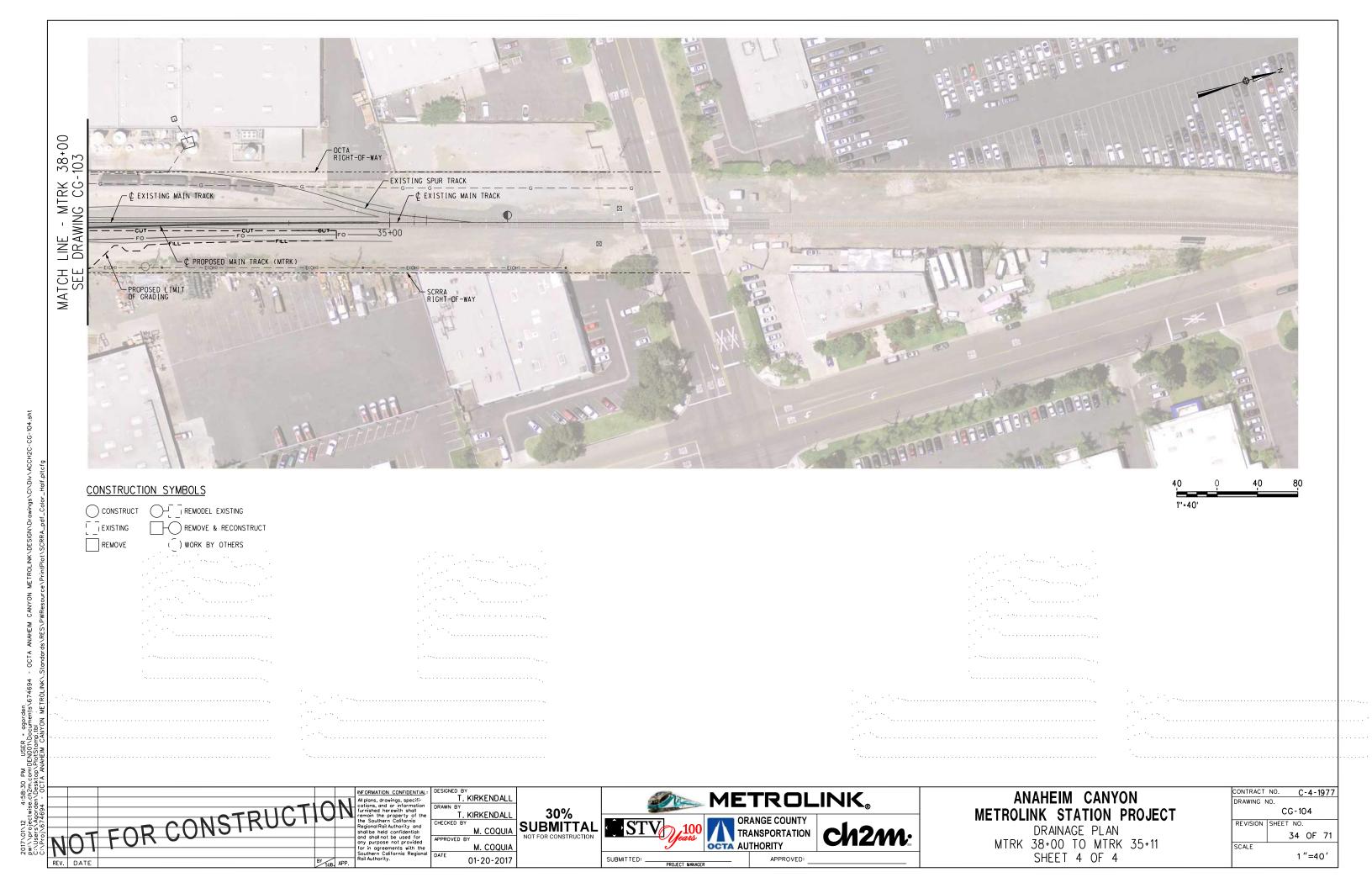
CONTRACT	NO.	C-4-1	1977		
DRAWING NO.					
CG-101					
REVISION	SHEET	NO.			
		31 OF	71		
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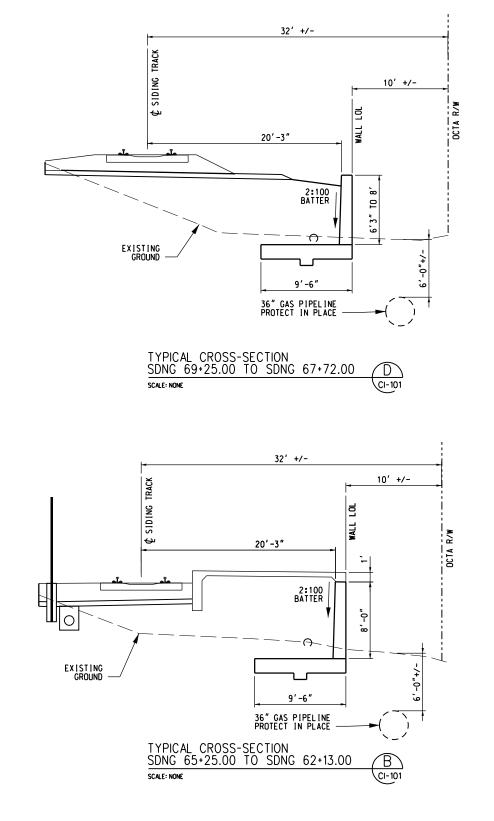
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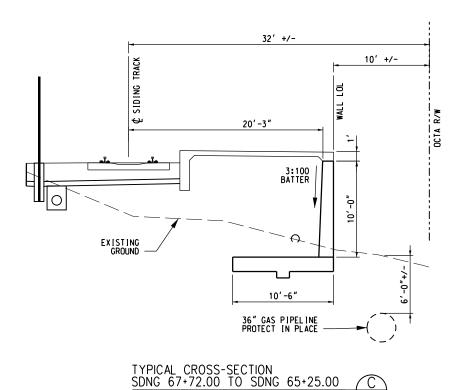


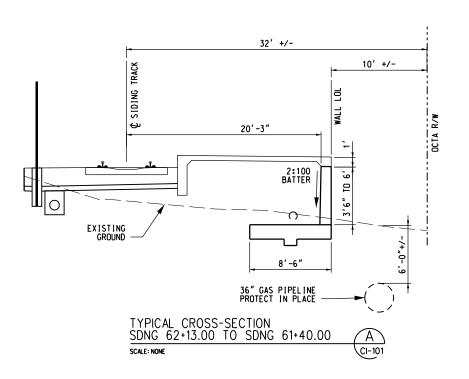


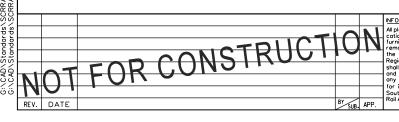
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NFORMATION CONFIDENTIAL:
All plans, drawings, specifications, and or information furnished herewith shall remain the property of the Southern Colifornia Regional Rail Authority and shall be held confidential: and shall not be used for any purpose not provided for in agreements with the Southern Colifornia Regional Rail Authority.

ESIGNED BY M. MAMAWAL 30% SUBMITTAL M. SATISH

A. LEWIS

A. SOKOL

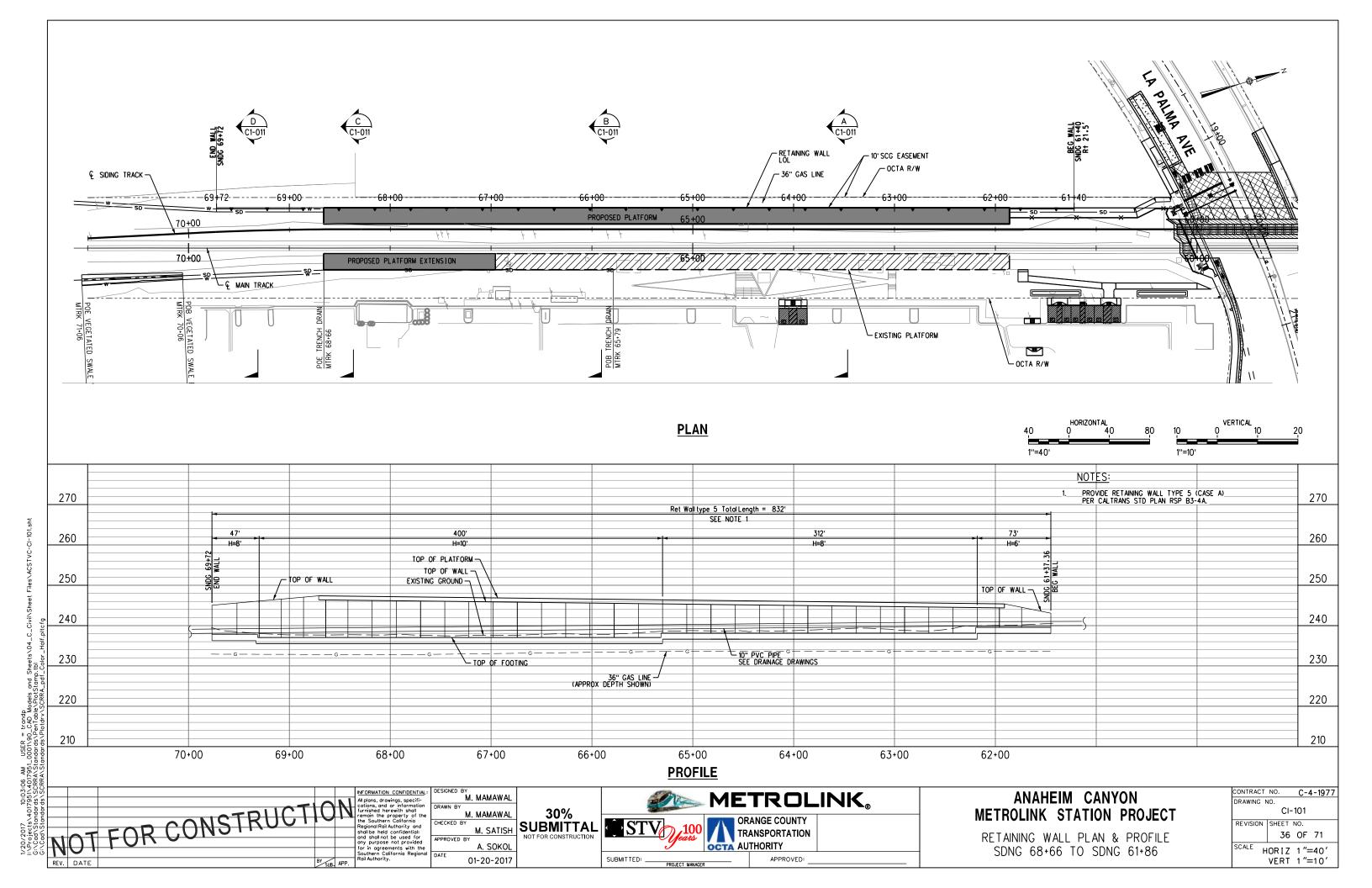
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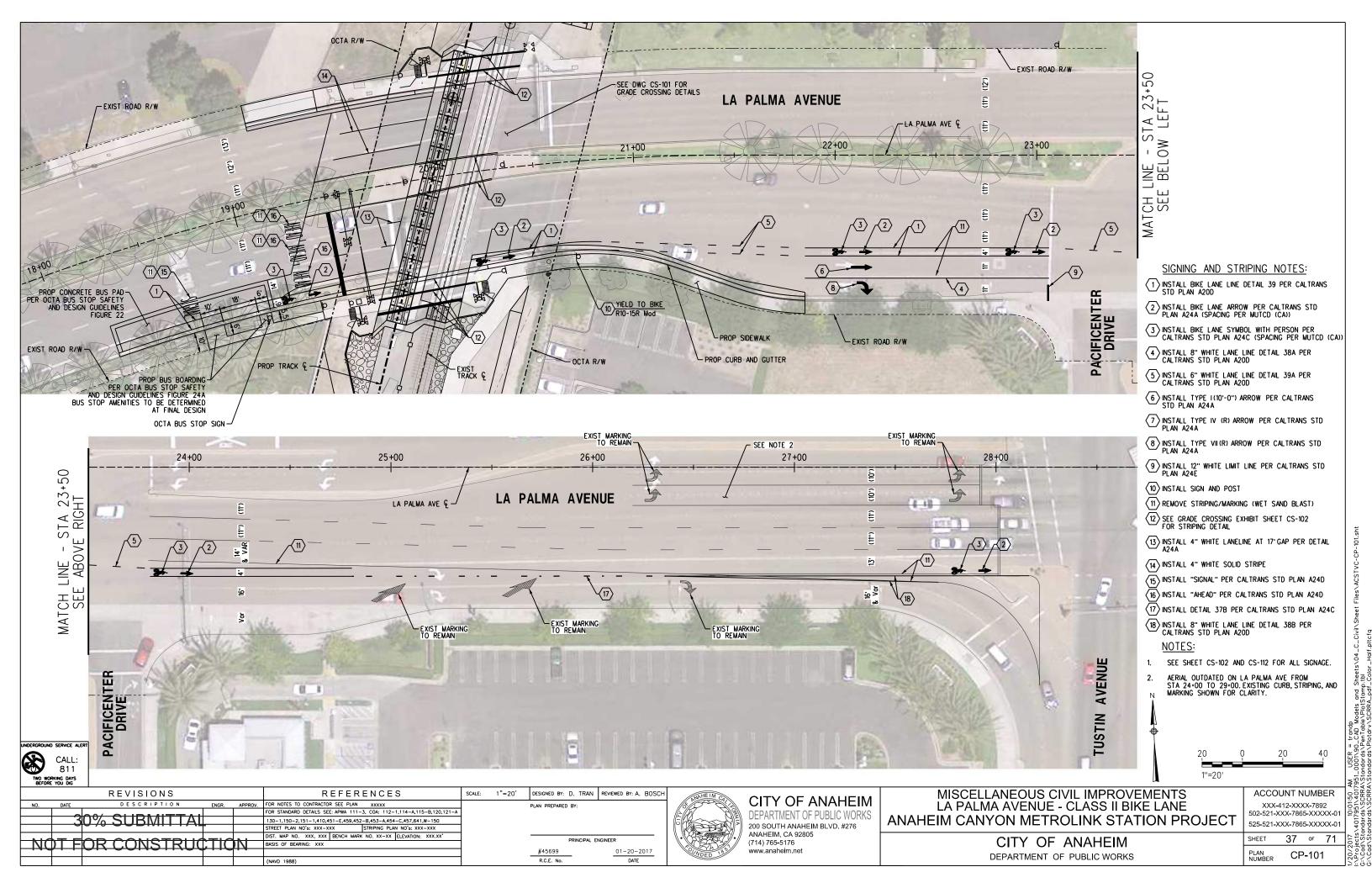


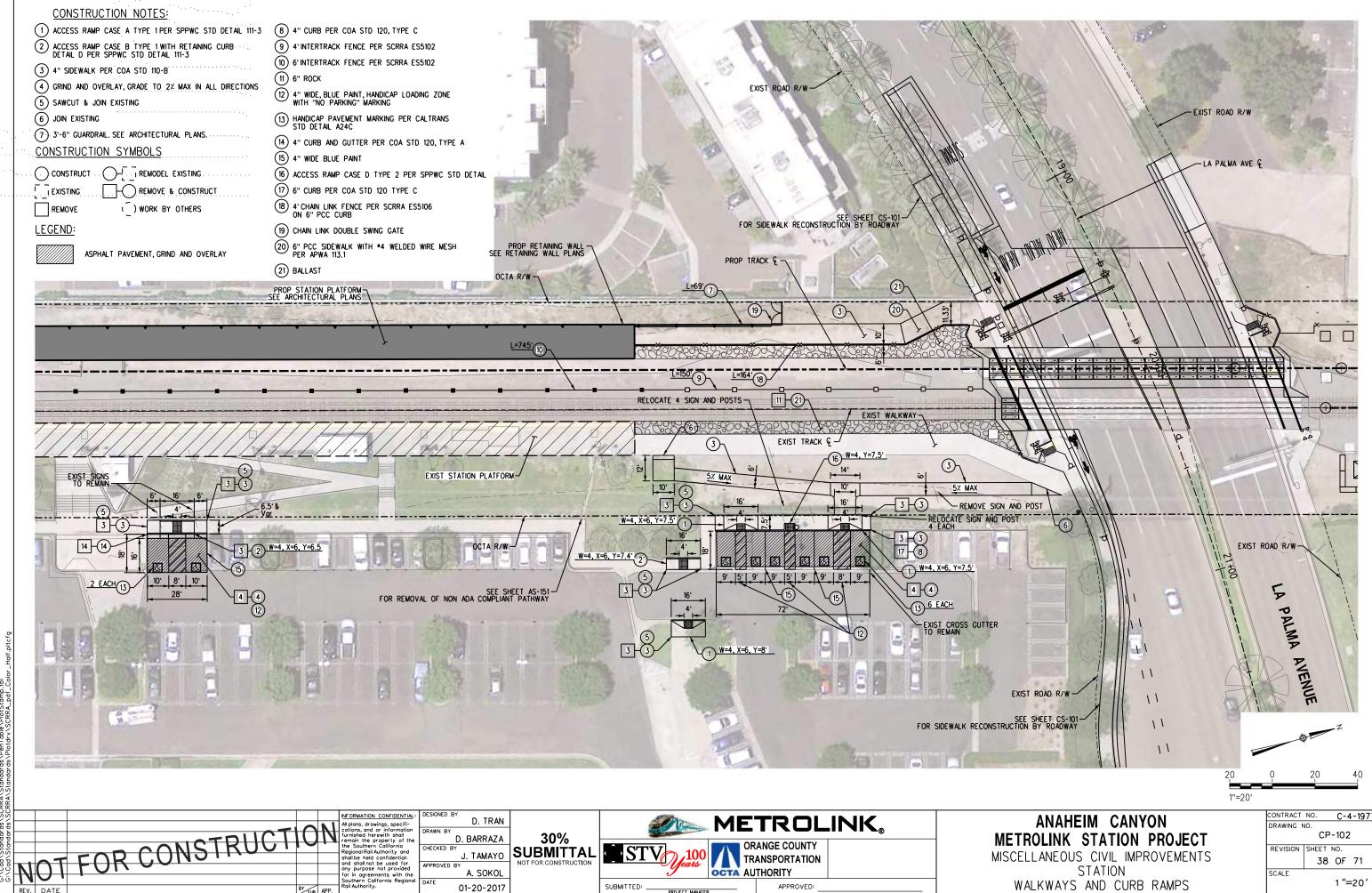
ANAHEIM CANYON METROLINK STATION PROJECT

RETAINING WALL TYPICAL SECTIONS

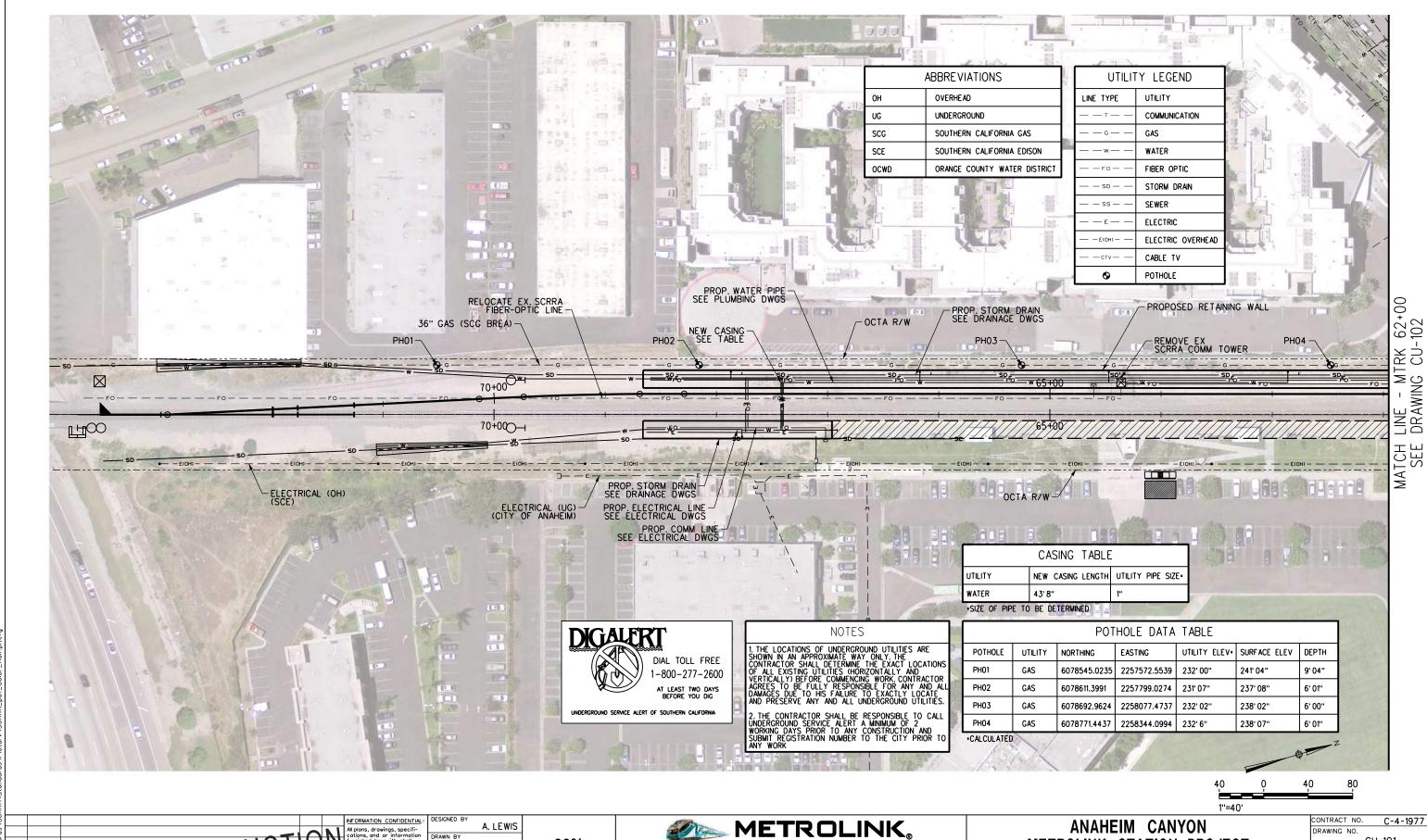
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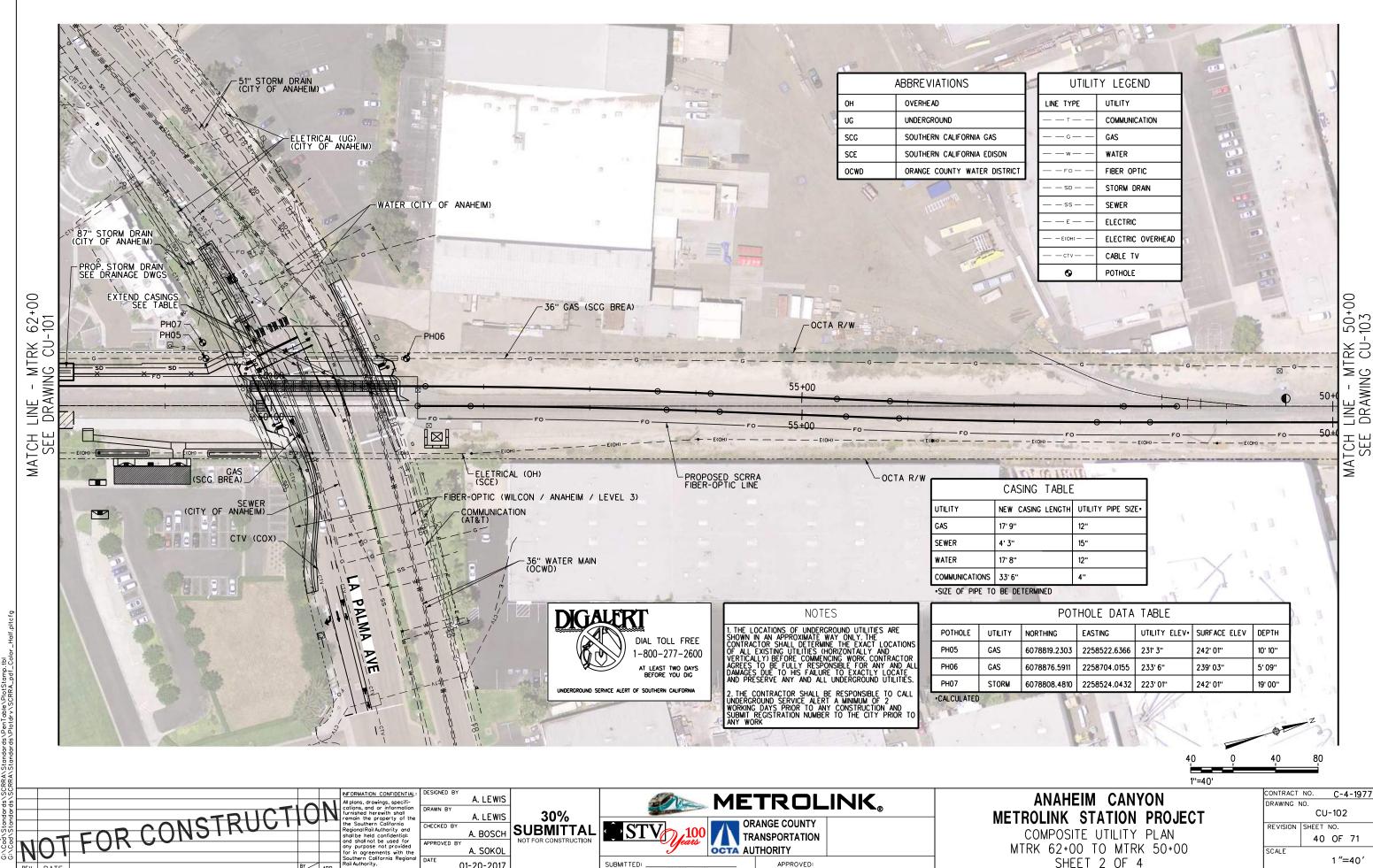
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METROLINK STATION PROJECT

COMPOSITE UTILITY PLAN MTRK 73+55 TO MTRK 62+00 SHEET 1 OF 4

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	39	OF	71
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TRANSPORTATION

OCTA AUTHORITY

SUBMITTED: _

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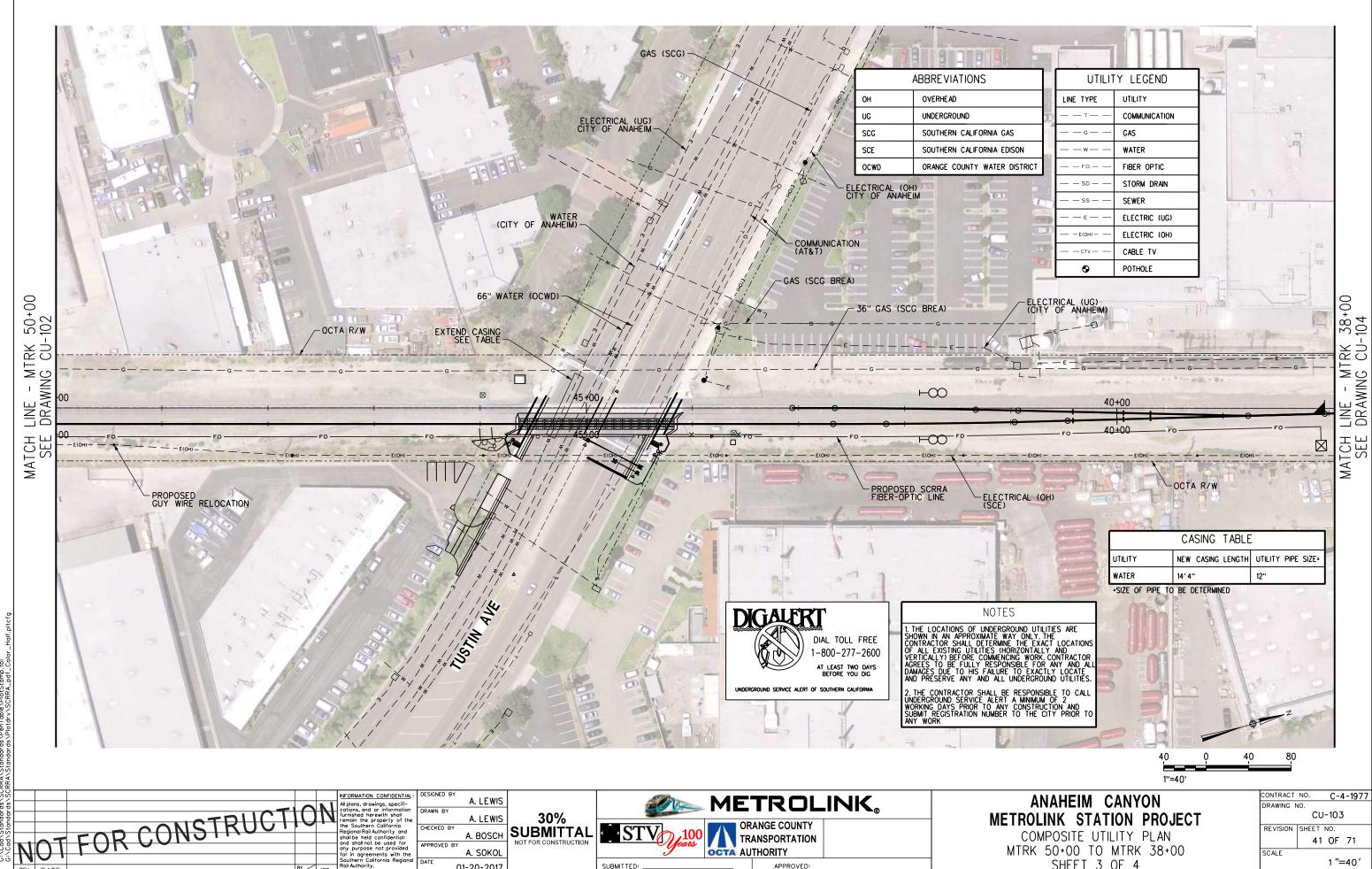
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40 OF 71

1 "=40 '

MTRK 62+00 TO MTRK 50+00

SHEET 2 OF 4



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SUBMITTED: _

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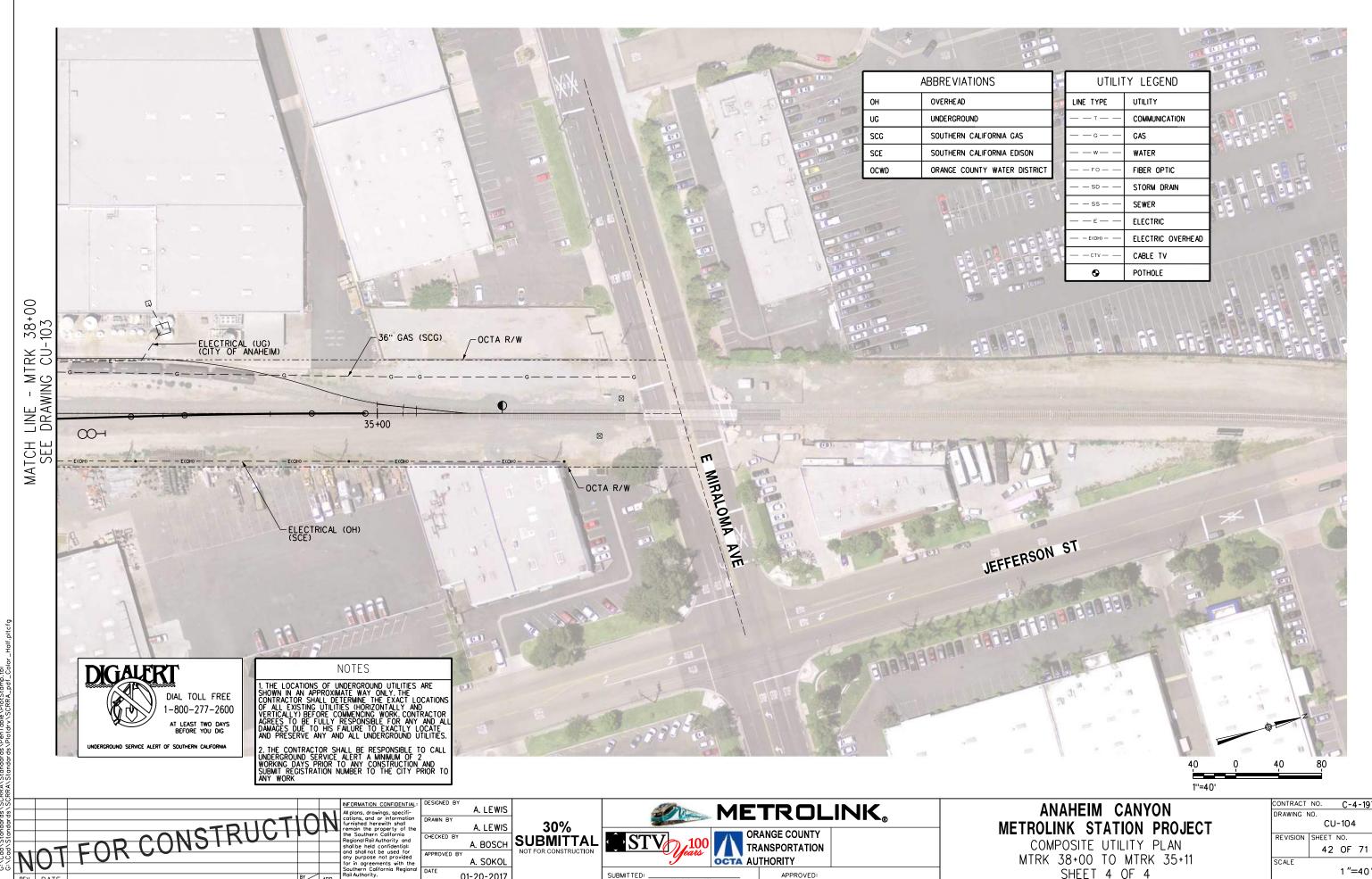
41 OF 71

1 "=40 '

MTRK 50+00 TO MTRK 38+00

SHEET 3 OF 4

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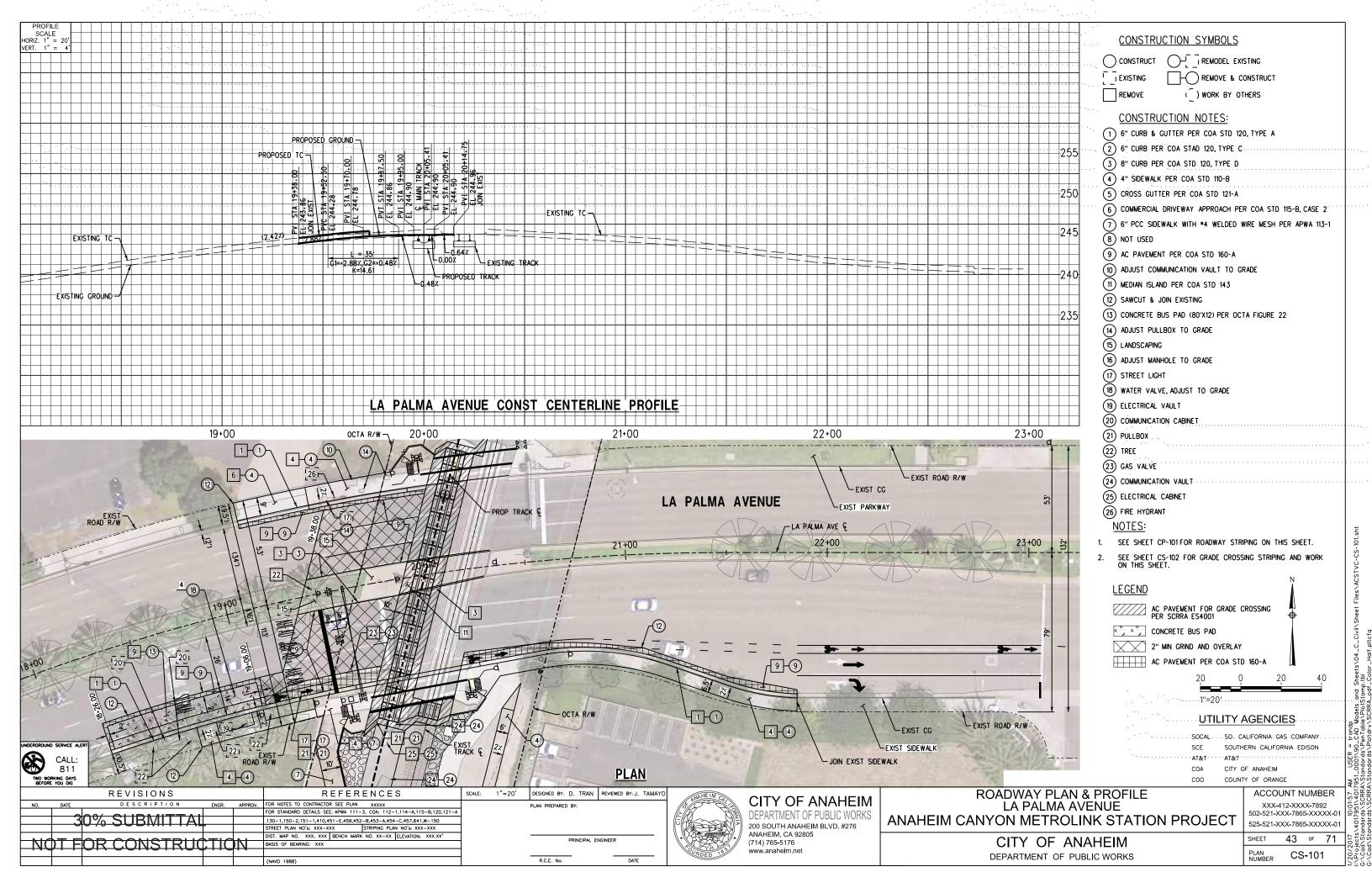
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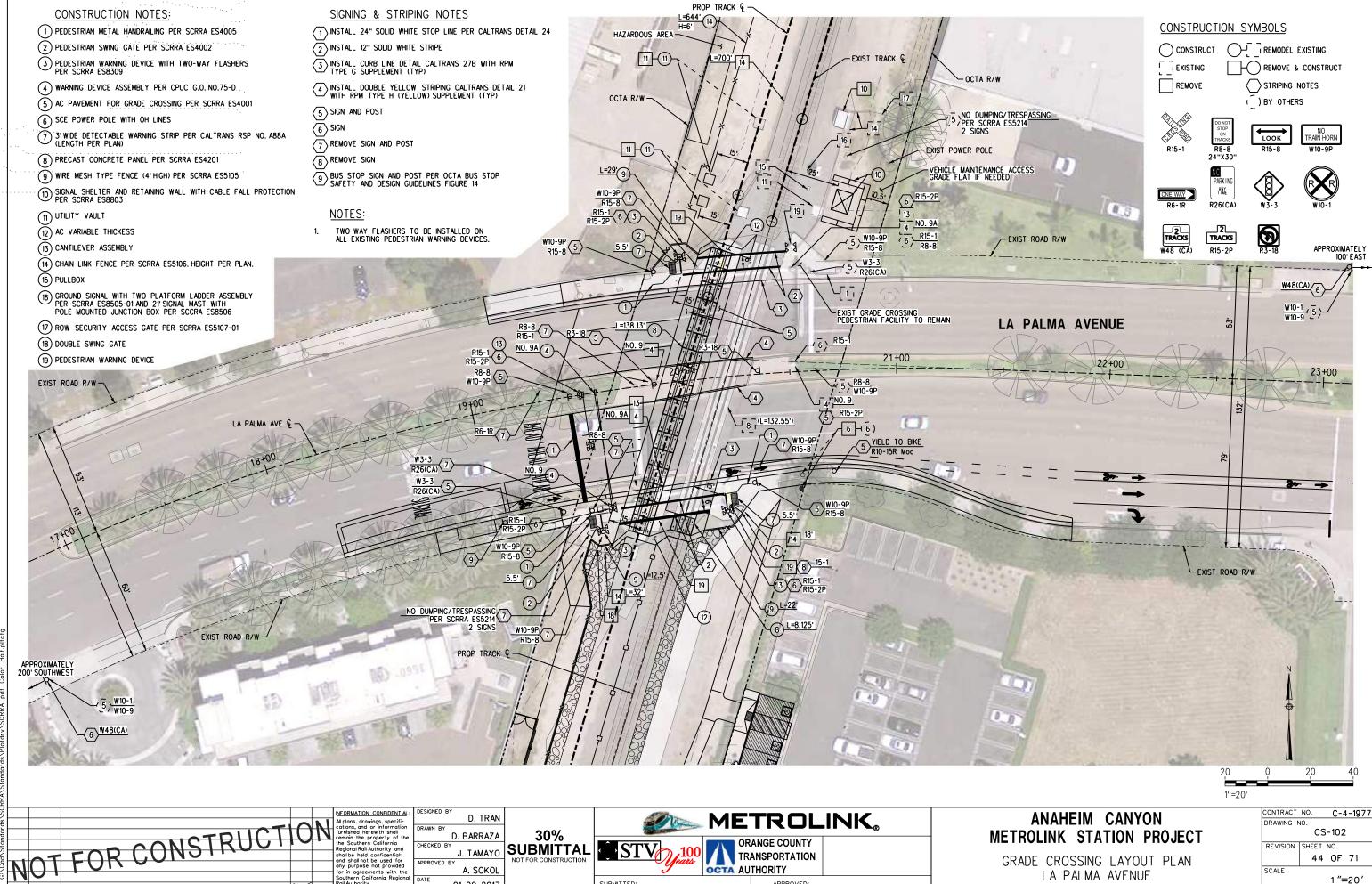
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42 OF 71

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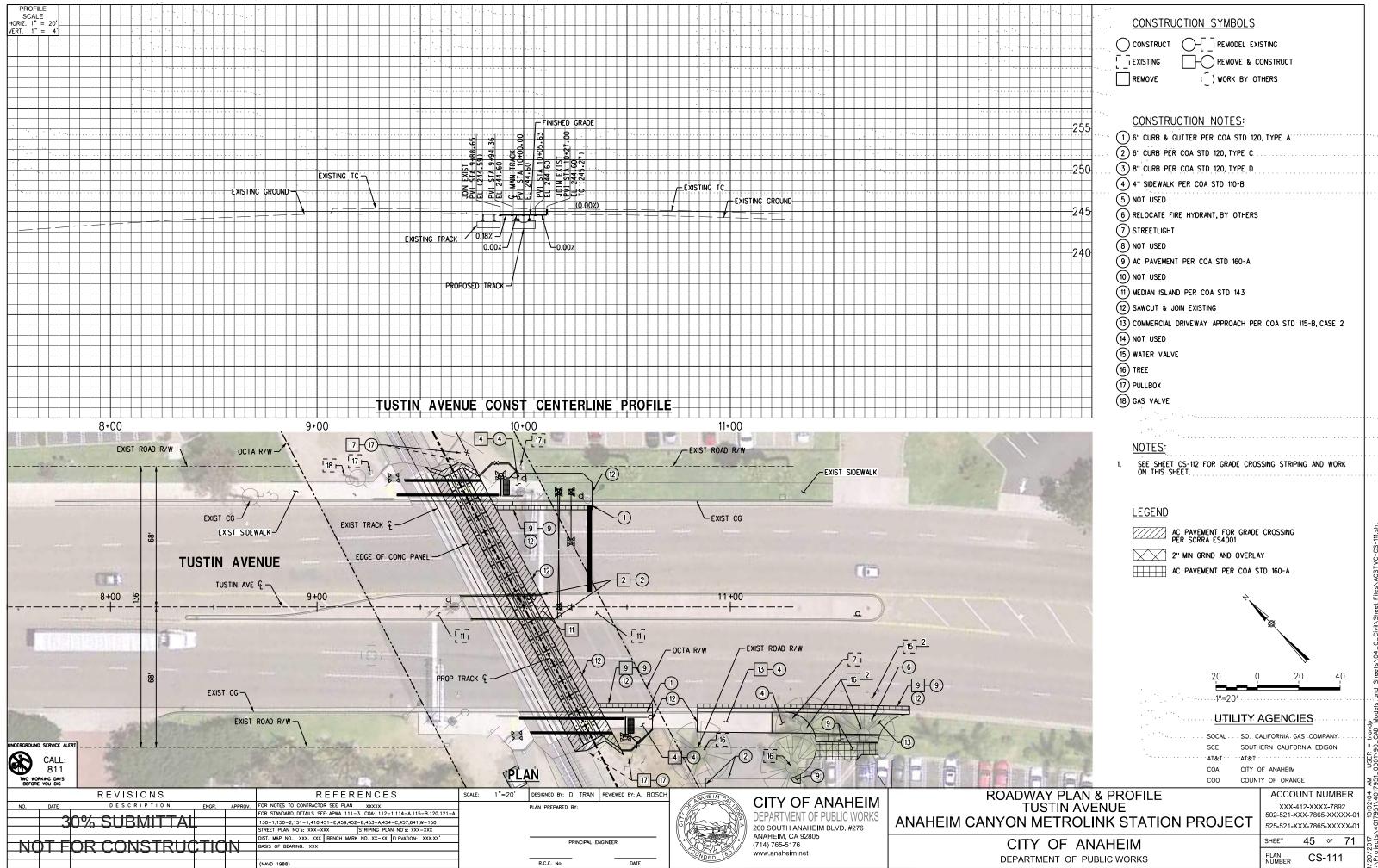
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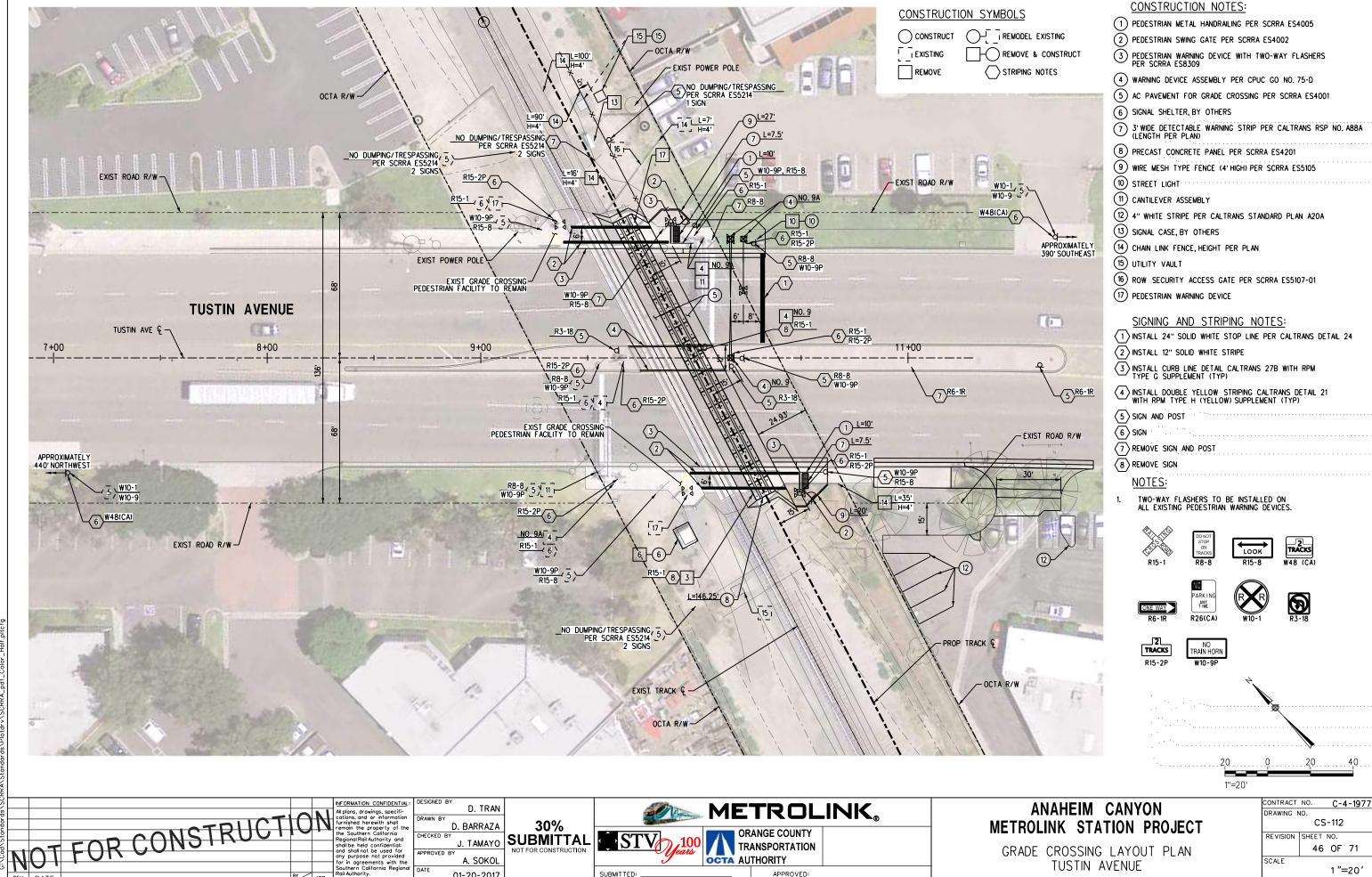




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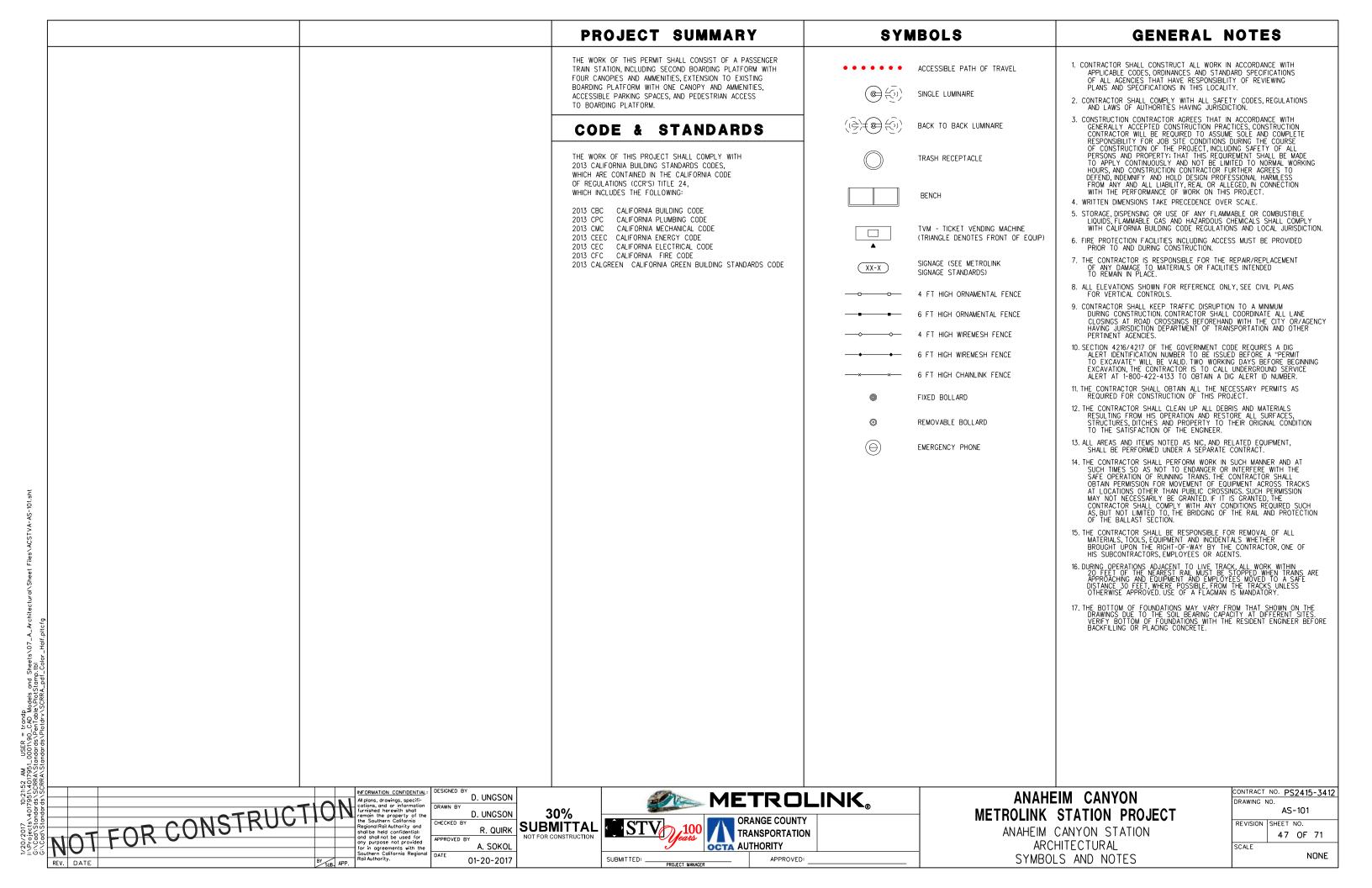
TUSTIN AVENUE

1"=20'

A. SOKOL

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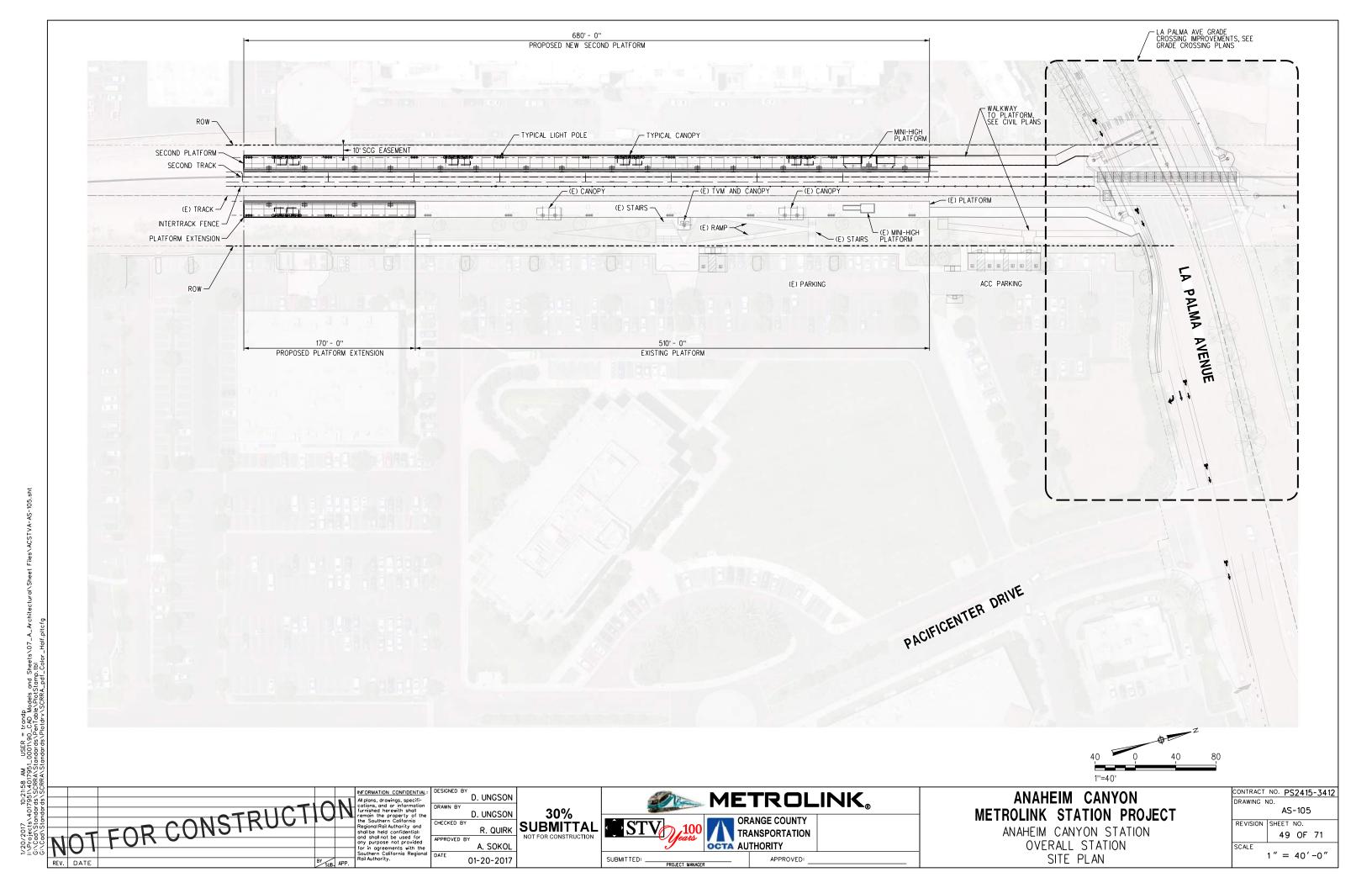
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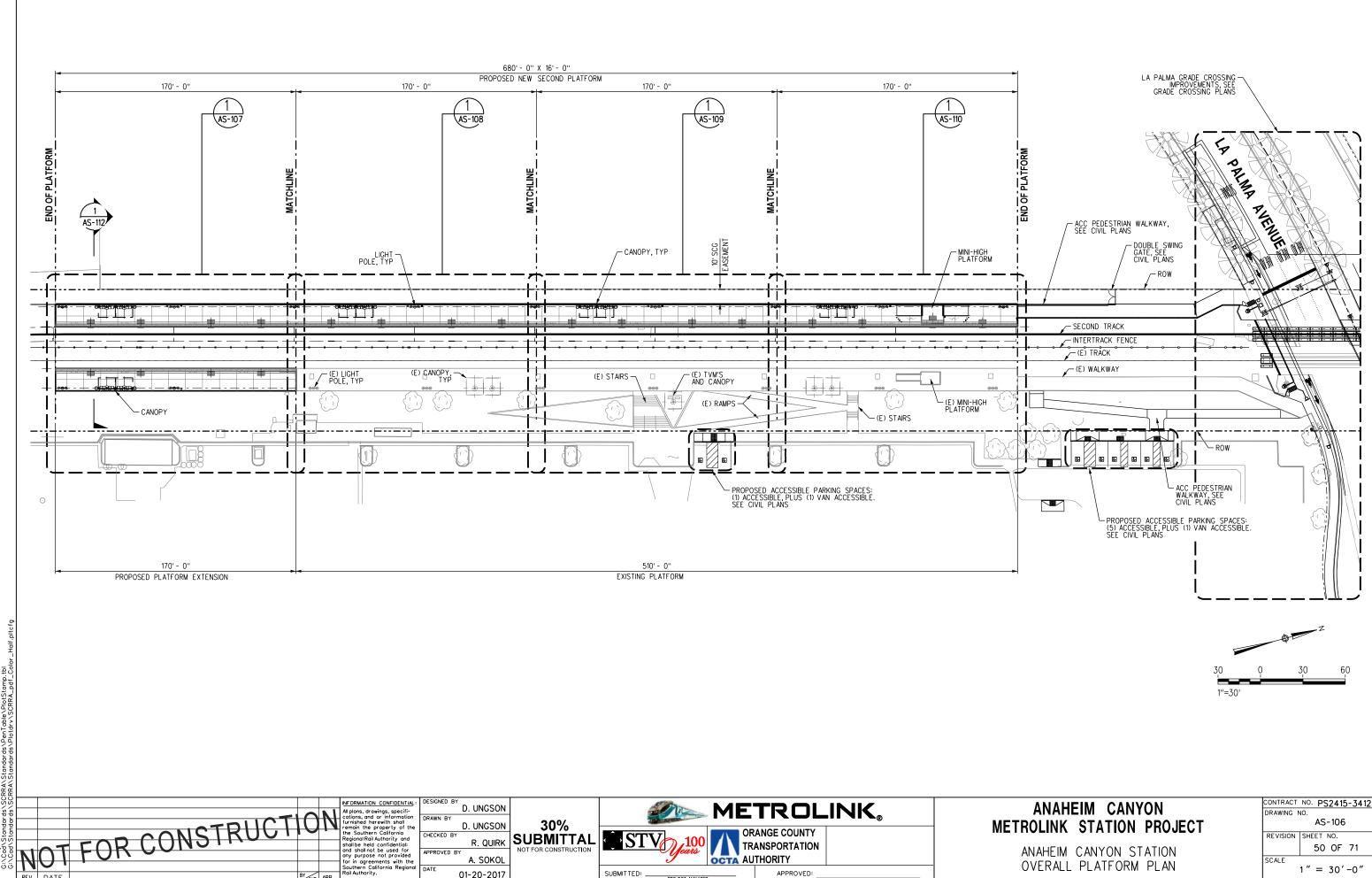


					ABBREV	ATIONS					
ACC ACO		D DEP	DEPRESSED, DEPTH DETAIL	F FRPP	FIBERGLASS REINFORCED PLASTIC PANELS	M MAS MAINT	MASONRY MAINTENANCE	Q QTY	QUANTITY	T TEL T&B	TELEPHONE TOP AND BOTTOM
AD	AREA DRAIN	DF	DRINKING FOUNTAIN	FS	FINISH SURFACE	MAX	MAXIMUM			TBD	TO BE DETERMINED
ADA		DIA	DIAMETER	FT	FOOT, FEET	MECH	MECHANICAL			TBR	TO BE REMOVED
AFG		DIAG	DIAGONAL	FTG	FOOTING	MED	MEDIAN, MEDIUM	R R	RADIUS	TD	TOP OF DECK
AFF	ABOVE FINISHED FLOOR	DIM	DIMENSION	F TO F	FACE TO FACE	MEM	MEMBRANCE	(R)	RECESSED, RELOCATED	TDD	TELECOMMUNICATION DEVICE
ALIG	N ALIGNMENT	DIR	DIRECTION	FUR FWY	FURRING	MET/MTL	METAL	RB	RESILIENT BASE	TEMP	FOR THE DEAF TEMPORARY
AL T	ALTERNATE	DISP	DISPENSER	FWY	FREEWAY	MFG	MANUFACTURER	RC	REINFORCED CONCRETE	TG	TOP OF GRADE
ALU		DN	DOWN	G GA	GAGE, GAUGE	MH	MANHOLE	RCTC	RIVERSIDE COUNTY TRANSPORTATION COMMISSION	THK	THICK(NESS)
AP	ACCESS PANEL	DO	DOOR OPENING	GALV	GALVANIZED	MIN	MINIMUM	RCFC&WCD	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	TK	TRACK
APPI		DP DR	DISABLED PERSON	GEN	GENERAL	MIRR MISC	MIRROR			тос	TOP OF CONCRETE, TOP OF C
APW	A AMERICAN PUBLIC WORKS ASSOCIATION	DRWY	DOOR, DRIVE DRIVEWAY	GL	GLASS, GLAZING	MJPA	MISCELLANEOUS MARCH JOINT POWERS AUTHORITY	RD	ROAD	TOL	TOLERANCE
ARCI		DRWII	DOWNSPOUT	GLB	GLU-LAMINATED BEAM	MO	MASONRY OPENING	RDWY	ROADWAY	ТОМ	TOP OF MASONRY
A/R	AS REQUIRED	DVM	DEBIT CARD VALIDATOR MACHINE	GND	GROUND	MOD	MODIFIED	RE:	REFER	TOP	TOP OF PIPE
ASS.	Y ASSEMBLY	DWG(S)	DRAWING, DRAWINGS	GR	GUARDRAIL/ GRADE	MON	MONUMENT	RECT	RECTANGULAR	TOR	TOP OF RAIL
ATR	ABOVE TOP OF RAIL	3 6		GRD	GRADE, GRADING	MTD	MOUNTED	REF	REFERENCE	TOS	TOP OF SLOPE
AVE	AVENUE		EAST	GRTG	GRATING	MTL	MATERIAL, MATERIALS	REINF	REINFORCE, REINFORCED	TOW	TOP OF WALL
		E (E)	EXISTING	GSP GVL	GALVANIZED STEEL PIPE GRAVEL	MTG	MOUNTING	REL	RELOCATE(D)	TP	TOP OF PLATFORM
BD	BOARD	EA	EACH	GYP	GYPSUM	MTTV	MULTITRIP TICKET VALIDATOR MACHINE	REM	REMOVE(D)	TPD	TOILET PAPER DISPENSER
BEL	BELOW	EB	EASTBOUND. EXPANSION BOLT	GYP BD	GYPSUM BOARD	MUL	MULLION	REQD	REQUIRED	T/R TVM	TOP OF RAIL
BET	BETWEEN	EF EF	EACH FACE	الم مادي	STI SOM DOMNU			RESIL	RESILIENT	TYP	TICKET VENDING MACHINE TYPICAL
BITU	M BITUMINOUS	EFC	EXPOSED FINISH CONCRETE	 	HIGH	N N	NORTH	REV	REVISION, REVISED	115	THIONE
BLD	G BUILDING	EG	EDGE OF GUTTER	H H	HIGH	N (N)	NEW	RH	RIGHT HAND	1	
BLK	G BLOCKING	EJ	EXPANSION JOINT	HB	HOSE BIBB	N/A	NOT APPLICABLE	RL	RAIL(ING)	U UNF	UNIFINISHED
BLVI		EL	ELEVATION	HC HD	HOLLOW CORE, HANDICAP(PED) HEAVY DUTY	NAP	NOT A PART	RM	ROOM	UNO	UNLESS NOTED OTHERWISE
BNSI	F BURLINGTON NORTHEN SANTA FE RAILWAY	ELEC	ELECTRICAL	HDR	HEADER HEADER	NB	NORTHBOUND	RO	ROUGH OPENING	UTIL	UTILITY
ВМ	BEAM	ELEV	ELEVATOR	HDWE	HARDWARE	NEG	NEGATIVE	ROW, R/W	RIGHT OF WAY		
BOS		EMER	EMERGENCY	HM	HOLLOW METAL	NIC	NOT IN CONTRACT	RR	RAILROAD	V VAR	VARIES
BOT	BOTTOM	EMP	EMERGENCY MANAGEMENT PANEL	HORIZ	HORIZONTAL	NO	NUMBER	RT	RIGHT	▼ VENT	VENTILATION
וטט	50 Om	ENCL	ENCLOSURE	HR	HANDRAIL	NOM	NOMINAL	RTA RVS	RIVERSIDE TRANSIT AGENCY REVERSE (SIDE)	VERT	VERTICAL
	01.0050.000007	ENGR	ENGINEER, ENGINEERING	HSS	HOLLOW STRUCTURAL SECTION	NTS	NOT TO SCALE	l - DW	RETAINING WALL	VS	VERSUS
CCT		EP .	EDGE OF PAVEMENT	HT	HEIGHT			S RW	INCTAINING WALL		
CB	CALIFORNIA PUNI DINC CODE	EPIS	ELECTRONIC PASSENGER INFORMATION SYSTEM	HWY	HIGHWAY	O 0A	OVERALL			w	WEST
CBC CIP	CALIFORNIA BUILDING CODE CAST IN PLACE	EQ	EQUAL, EQUATION			ОС	ON CENTER	S .	SOUTH	W W/	WITH
CLF	CAST IN PLACE CHAIN LINK FENCE	EQUIP	EQUIPMENT			OD	OUTSIDE DIAMETER	(S)	SURFACE MOUNTED	WB	WESTBOUND
CEM		ES ES	ENGINEERING STANDARD(S)	I ID	IDENTIFICATION, INSIDE DIAMETER	ОН	OPPOSITE HAND	SB	SOUTHBOUND	wc	WATER CLOSET
CFT	CUBIC FOOT	ESMT	EASEMENT	I IN	INCH(ES)	OHD	OVERHEAD	SCRRA	SOUTHERN CALIFORNIA REGIONAL RAIL AUTHORITY	W/O	WITHOUT
CJ	CONTROL JOINT, CONSTRUCTION JOI	IT ET	EMERGENCY TELEPHONE	INFO	INFORMATION	OPER	OPERATOR	SCD	SEAT COVER DISPENSOR	WP	WORK POINT
CL,		EW	EDGE OF WALK	INSUL	INSULATION	OPNG	OPENING	SCHED	SCHEDULE	W/R	WATER RESISTANT
CLG	_	EXCA	EXCAVATE	INT	INTERIOR	0PP	OPPOSITE	SCN	SCREEN	WT	WEIGHT
CLK		EXP	EXPANSION	ISA	INTERNATIONAL SYMBOL OF			SD	STORM DRAIN		
CLK	G CAULKING	EXPD	EXPOSED		ACCESSIBILITY	D P	POWER	SECT	SECTION	Y XING	CROSSING
CLR	CLEAR, CLEARANCE	EXT	EXTERIOR			■ PA	PLANTING AREA, PUBLIC ADDRESS	SERV	SERVICE	^	
CMS	CHANGEABLE MESSAGE SIGNAGE			J J	JOINT	PB	PULL BOX	SF	SQUARE FEET		
CMU	CONCRETE MASONRY UNIT	■ (F)	FUTURE	JB	JUNCTION BOX	PC	PRECAST CONCRETE, PIECE(S)	SHT	SHEET	MISCELLANEO	US
CND	CONDUIT	FA	FIRE ALARM	JPA	JOINT POWERS AUTHORITY	PED	PEDESTAL, PEDESTRAIN	SIG	SIGNAL LINE		AND
CO	CLEAN OUT	FC	FACE OF CONCRETE			PERF	PERFORATED	SIM	SIMILAR	Ž	ANGLE
COL		FC0	FLOOR CLEAN OUT	K KOP	KNOCK OUT PANEL	PERI	PERIMETER	SL	SLOPE	@	AT
COM		FD	FLOOR DRAIN	V		PK	PARKING	SM	SHEET METAL SCREWS	ø	DIAMETER
CON		FDN	FOUNDATION			PL	PLATE, PROPERTY LINE	SMS	SHEET METAL SCREWS	1	FEET
CON		FE	FIRE EXTINGUISHER	L	LENGTH	P/L	PROPERTY LINE	S/N SND	SERIAL NUMBER SANITARY NAPKIN DISPENSER	ıı ıı	INCHES
CON		FG	FINISHED GRADE	LAV	LAVATORY	PLAT(S)	PLATFORM(S)	SND SNR	SANITARY NAPKIN DISPENSER SANITARY NAPKIN RECEPTACLE	*	NUMBER
CON		FH	FIRE HYDRANT	LB(S)	POUND(S)	PNL PRE-FIN	PANEL PRE-FINISHED	SPEC(S)	SPECIFICATION(S)	+/-, <u>+</u>	PLUS/MINUS TOLERANCE
CON		FIN	FINISH, FINISHED FLASHING	LCD	LIQUID CRYSTAL DISPLAY	PROP	PROPOSED	SPKR	SPEAKER		
CPU		FLG FLOUR	FLOURESCENT	LED	LIGHT EMMITTING DIODE MESSAGE SIGN	PTD	PAINTED, PAPER TOWEL DISPENSER	SQ	SQUARE		
OI U	C CALIFORNIA PUBLIC UTILITIES COMMISSION	FLOUR	FLOOR(ING)	LF	LINEAL FEET	PVMT	PAINTED, PAPER TOWEL DISPENSER PAVEMENT	SST	STAINLESS STEEL		
CS	COMMUNICATIONS SHELTER	FLR	FENCE	LG	LONG	PVMI	PAVEMENT PERRIS VALLEY LINE	SS	SANITARY SEWER		
CYD	CUBIC YARD	FOC	FACE OF CONCRETE	LGT	LIGHT	PWD	PLYWOOD	ST	STREET		
		FOF	FACE OF CONCRETE	LGTH	LENGTH	"""	, L 1 11 000	STA	STATION		
		FOM	FACE OF MASONRY	LH	LEFT HAND			STD	STANDARD		
		FOS	FACE OF STUDS	LKR	LOCKER			STL	STEEL		
		FP	FIRE PROOF	LN LONG	LANE LONGITUDINAL			STOR	STORAGE		
		FR	FRAME(D), (ING)	LP	LOW POINT			STRL	STRUCTURAL		
		FT	FEET	LT	LEFT			STRUCT	STRUCTURE		
				LTG	LIGHTING			SUSP	SUSPENDED		
				LVL	LEVEL			SWK	SIDEWALK		
								SYMM SYS	SYMMETRICAL SYSTEM		
	·								31312#		
			INFORMATION CONFIDENTIAL: All plans, drawings, specifications, and or information DRAWN BY	D. UNGSON		MET	ROLINK _®		ANAHEIM CAN		CONTRACT NO. PS DRAWING NO.
	- CHOT	BH(:H)	furnished herewith shall remain the property of the the Southern California	D. UNGSON	30%		GE COUNTY		METROLINK STATION	PROJECT	AS-
	Lean CONSI	DOO!	the Southern California Regional Rail Authority and shall be held confidential:	r. QUIRK SUI	BMITTAL STV				ANAHEIM CANYON S		REVISION SHEET
	/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		and shall not be used for	NOTE	OR CONSTRUCTION	IKAN	SPORTATION				48
0-	FOR CONS.		and shall not be used for approved any purpose not provided		Meur		ODITY		Y D O L LITE O T L D Y L	1	
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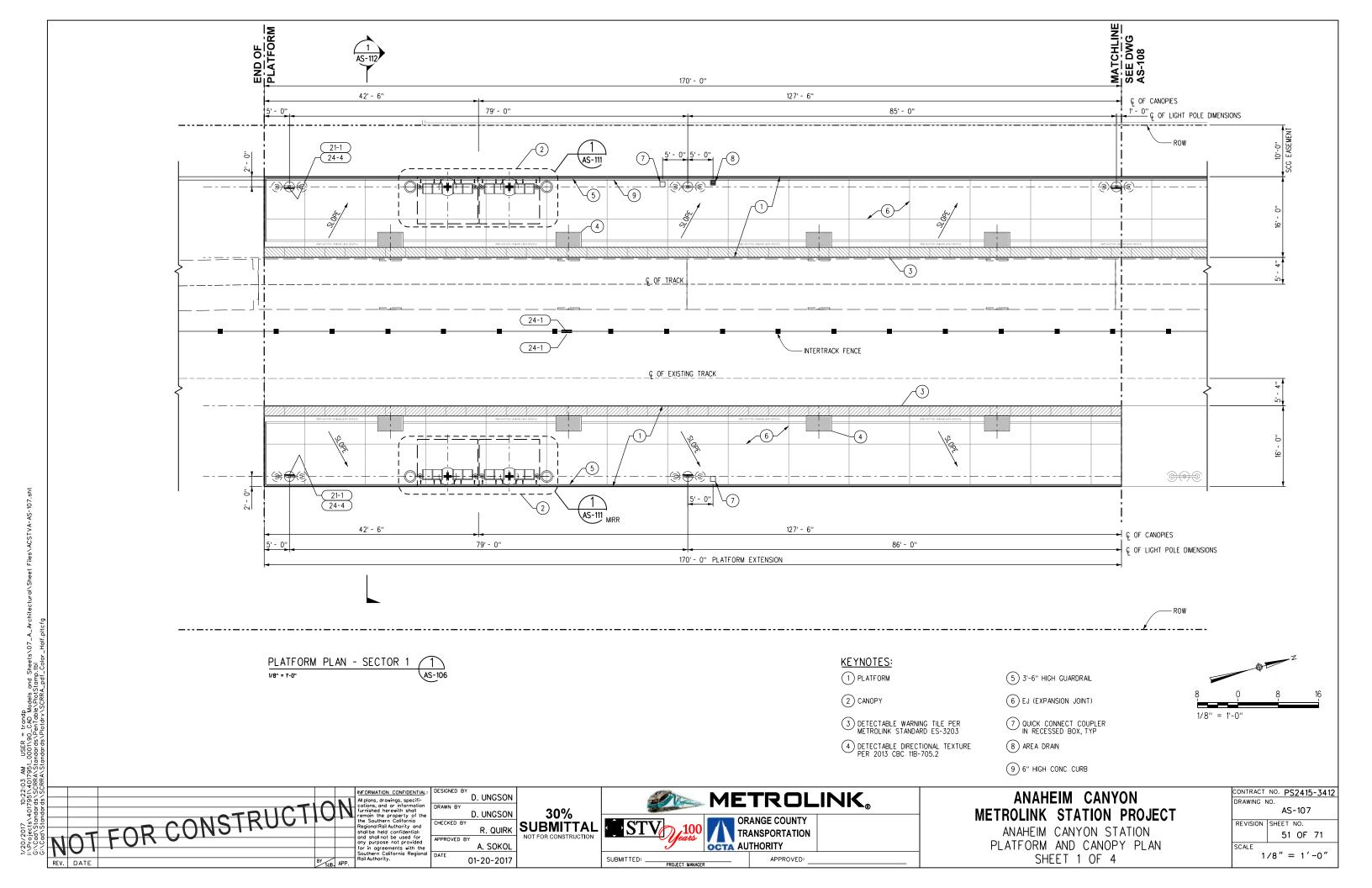


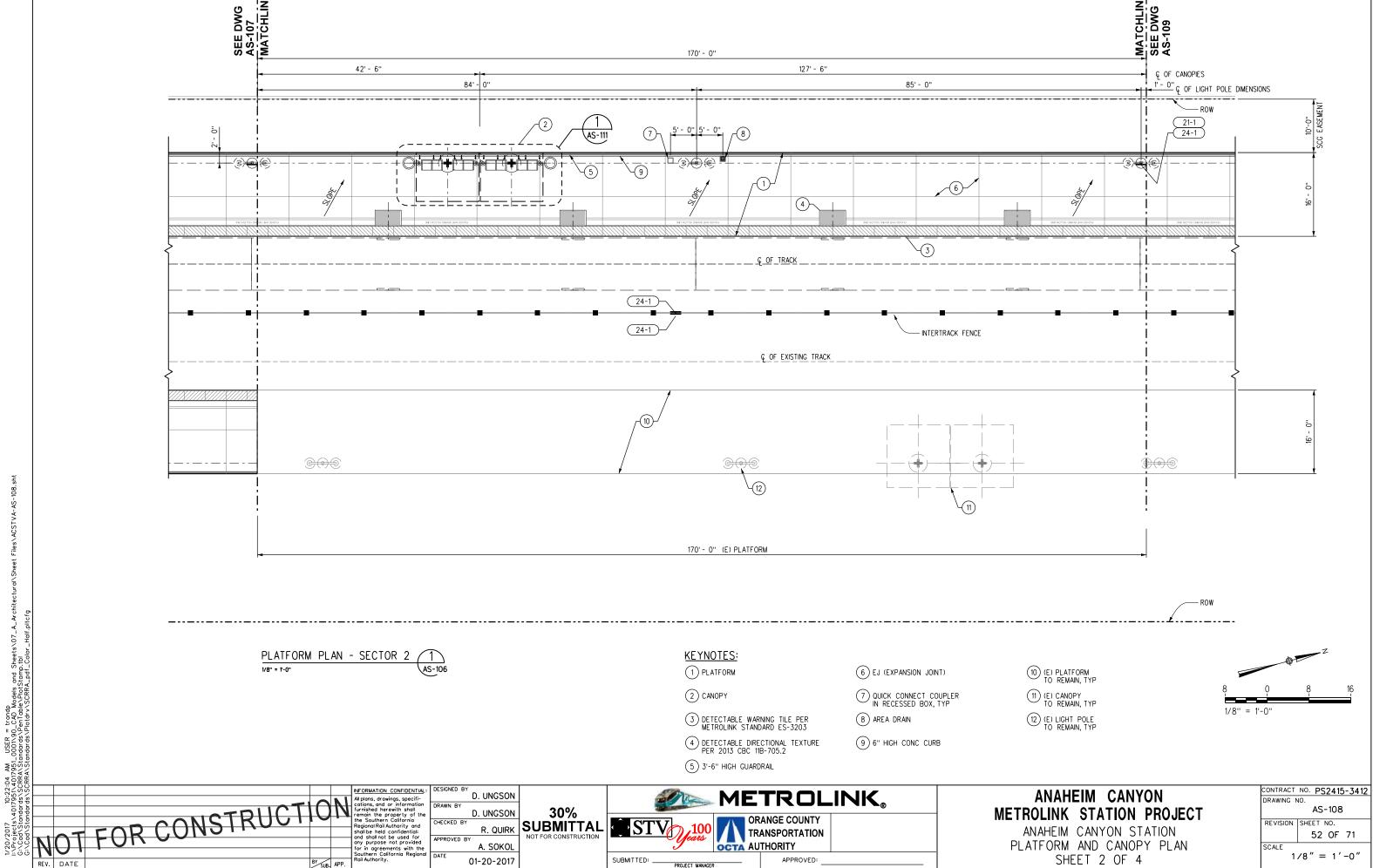


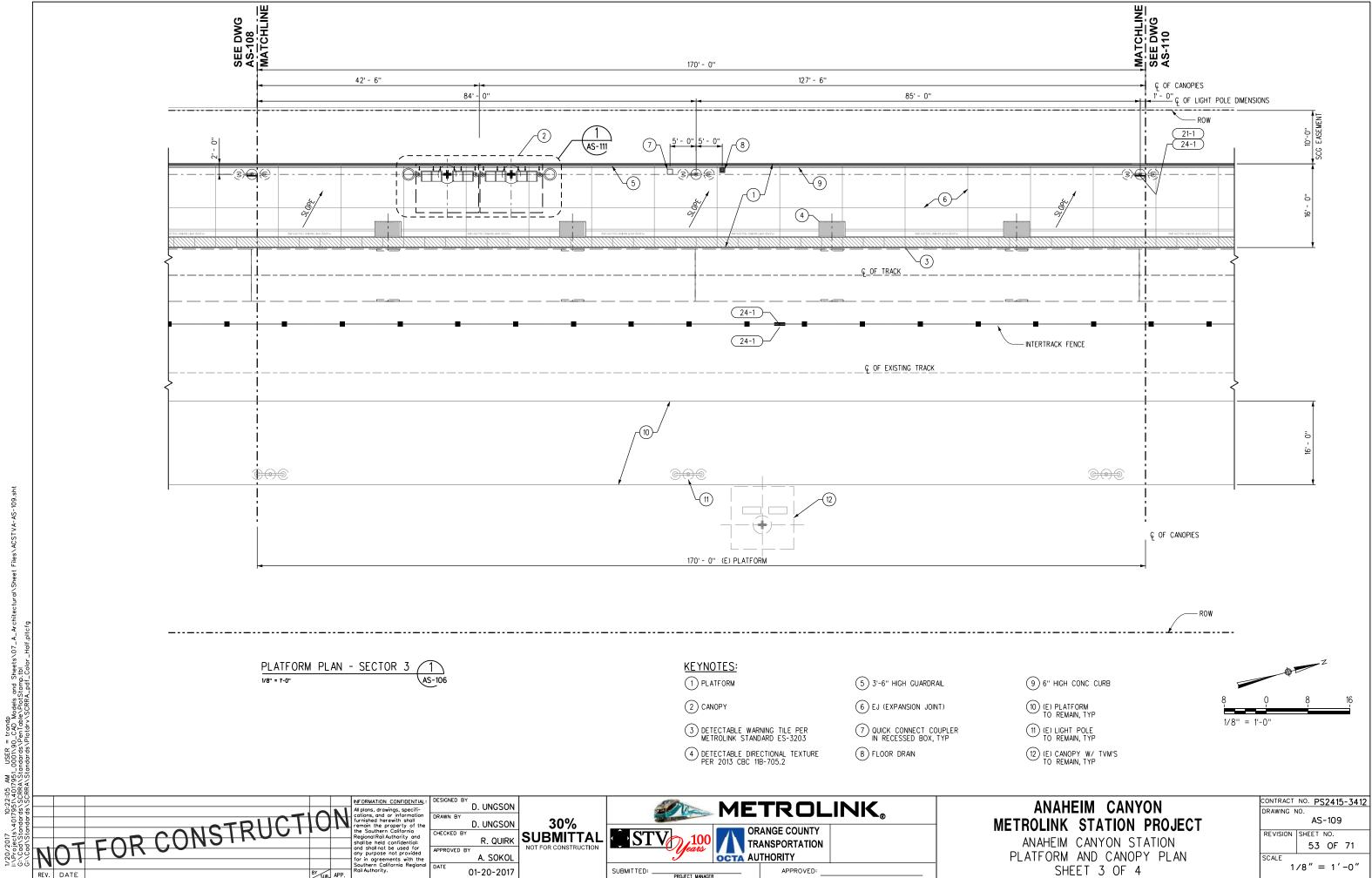
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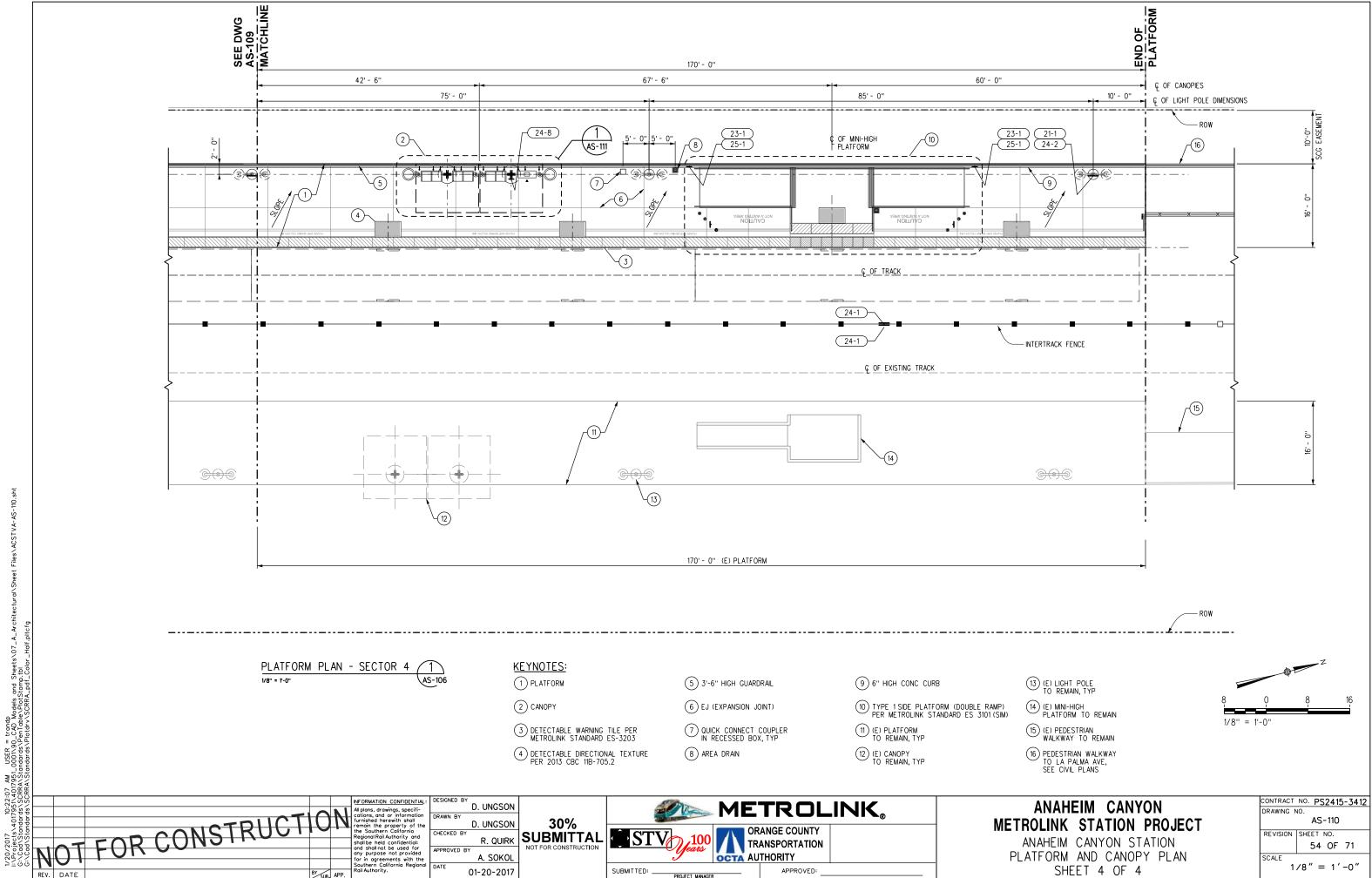
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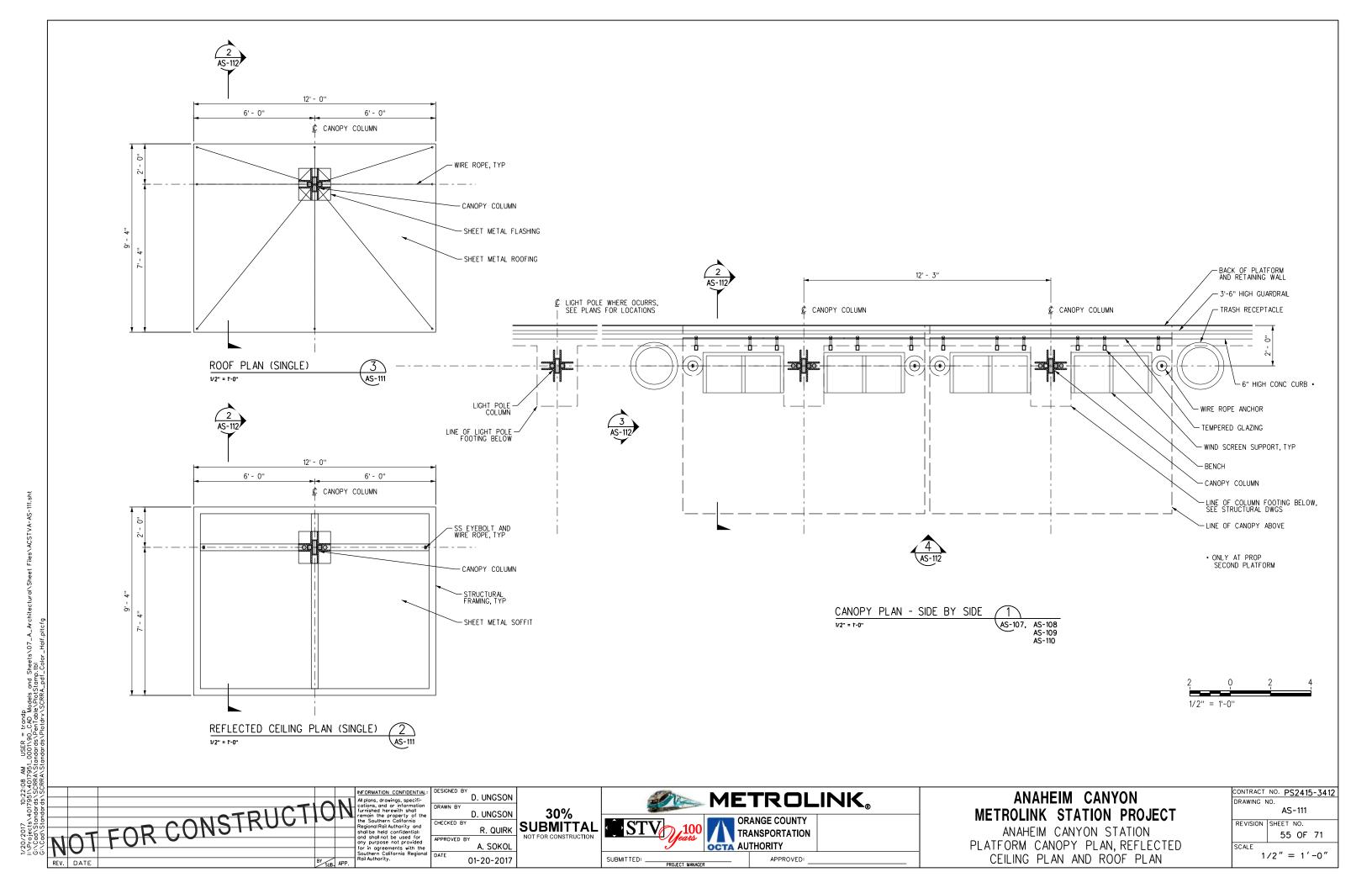
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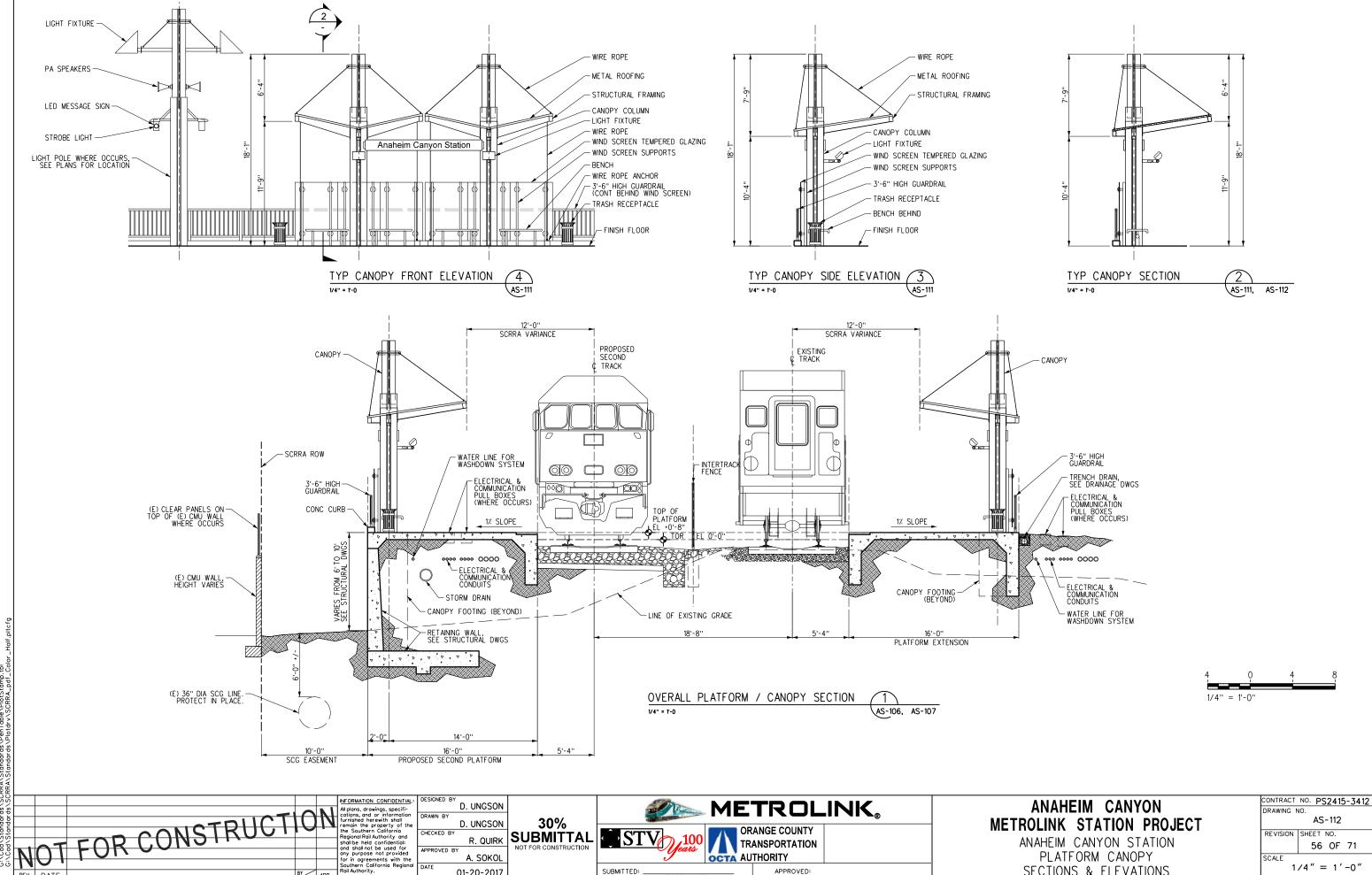












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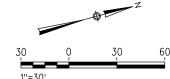
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1/4" = 1'-0"

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D. UNGSON D. UNGSON
R. QUIRK
SUBMITTAL
NOT FOR CONSTRUCTION

STV D. UNGSON A. SOKOL

01-20-2017



ANAHEIM CANYON **METROLINK STATION PROJECT**

ANAHEIM CANYON STATION PATH OF TRAVEL PLAN

CONTRACT	NO. F	S241	5-3412	
DRAWING N	10.			
AS-151				
REVISION	SHEET	NO.		
	57	OF	71	
SCALE	1 " =	: 30 <i>′</i>	-0"	

2015 CALIFORNIA BUILDING CODE AND TITLE 24 C.C.R. AND LATEST REVISIONS REFERRED TO HERE AS "THE CODE", AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES & STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.

- 3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE RESIDENT ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- 4. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE COMMISION.
- 5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK. DETAILS AND SCHEDULES INDICATED AS "TYPICAL" MAY NOT BE SPECIFICALLY REFERENCED ON DRAWINGS. DETERMINE WHERE EACH TYPICAL DETAIL OR SCHEDULE APPLIES BEFORE PROCEEDING WITH WORK. IF CONDITIONS ARE FOUND WHICH ARE NOT SPECIFICALLY DETAILED AND NO TYPICAL DETAIL OR SCHEDULE APPLIES, PROMPTLY NOTIFY RESIDENT ENGINEER. WHERE DETAILS ON DRAWINGS CONFLICT WITH METROLINK ENGINEERING STANDARDS, THE MOST STRINGENT APPLY.
- 6. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND ITS OCCUPANTS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO BRACING SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, THE INSTALLATION OF BARRIERS TO MINIMIZE EXCESSIVE OBSERVATION VISITS TO THE SITE BY THE RESIDENT ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS POCKETS FTC. LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL
- 8. PIPES SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED.
- 9. BRACE PIPING AND DUCTS COMPLYING WITH LATEST EDITION OF "SEISMIC RESTRAINTS MANUAL: GUIDELINES FOR MECHANICAL SYSTEMS" BY THE METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION.
- ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE OF THE LATEST REVISION, CURRENT AT DATE OF CONTRACT.
- A. REVIEW AND STAMP SHOP DRAWINGS PRIOR TO SUBMISSION TO RESIDENT ENGINEER. REVIEW FOR COMPLETENESS AND COMPLIANCE WITH CONTRACT
- B. SUBMIT SHOP DRAWINGS TO RESIDENT ENGINEER AS INDICATED OR SPECIFIED FOR REVIEW AND ACCEPTANCE PRIOR TO FABRICATION. REVIEW WILL BE FOR GENERAL CONFORMANCE WITH DESIGN INTENT CONVEYED IN CONTRACT DOCUMENTS
- C. SHOP DRAWINGS ARE NOT A PART OF CONTRACT DOCUMENTS. THEREFORE, RESIDENT ENGINEER'S REVIEW DOES NOT CONSTITUTE AN AUTHORIZATION TO DEVIATE FROM TERMS AND CONDITIONS OF THE CONTRACT.
- D. SHOP DRAWINGS WILL BE REJECTED FOR INCOMPLETENESS. LACK OF COORDINATION WITH OTHER PORTIONS OF CONTRACT DOCUMENTS, LACK OF CALCULATIONS (IF REQUIRED), OR WHERE MODIFICATIONS OR SUBSTITUTIONS ARE INDICATED WITHOUT PRIOR RÉVIEW PER PARAGRAPH ABOVE.
- E. SUBMIT SHOP DRAWINGS AND CALCULATIONS TO GOVERNING CODE AUTHORITY WHEN SPECIFICALLY INDICATED OR REQUESTED.
- F. MAINTAIN A COPY OF ALL SHOP DRAWINGS ACCEPTED BY RESIDENT ENGINEER AT SITE DURING CONSTRUCTION PERIOD.
- CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.

GENERAL NOTES (CONT.)

13. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:

EXTENT OF DEMOLITION OF EXISTING FINISHES INCLUDING, BUT NOT LIMITED TO, INTERIOR PARTITIONS, CEILINGS, FLOOR FINISHES, DOORS, WINDOWS, CABINETS, FIXED MEDICAL EQUIPMENT, ETC.

SIZE AND LOCATION OF ALL NEW DOOR AND WINDOW OPENINGS, EXCEPT AS

SIZE AND LOCATION OF ALL NEW INTERIOR AND EXTERIOR NON-BEARING **PARTITIONS**

SIZE AND LOCATION OF ALL NEW CONCRETE CURBS, FOUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGE IN LEVEL, CHAMFERS,

SIZE AND LOCATION OF ALL NEW FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN. NEW FLOOR AND ROOF FINISHES

DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.

14. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE

NEW PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.

NEW ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS. NEW CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES. SIZE AND LOCATION OF NEW MACHINE OR NEW EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.

15. DESIGN LOADS:

RAMP (PEDESTRIAN) PLATFORM (PEDESTRIAN)

PSF REDUCIBLE 100 PSF NON-REDUCIBLE 100 PSF NON-REDUCIBLE

16. SEISMIC ANALYSIS PER CHAPTER 16, OF THE 2015 CALIFORNIA BUILDING CODE.

SEISMIC DESIGN FACTORS: RISK CATERGORY = IV SITE CLASSIFICATION =

SPECTRAL RESPONSE ACCELERATIONS

 $(S_s) = 1.588 q$ = 0.600 g

SITE COEFFICIENT Fo = --SITE COEFFICIENT Fv = --

17. WIND LOADS:

A. RISK CATEGORY = IV B. BASIC WIND SPEED = 115 MPH

COEFFICIENT OF FRICTION

C. EXPOSURE C **FOUNDATION**

1. FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS IN GEOTECHNICAL REPORT NO. ----- PREPARED BY ------ DATED -----. PERFORM FOUNDATION WORK COMPLYING WITH REPORT. GEOTECHNICAL REPORT HEREBY BECOME PART OF THESE CONTRACT DOCUMENTS AND SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.

2. FOOTINGS ARE DESIGNED BASED ON THE FOLLOWING INFORMATION: ALLOWABLE BEARING

> DEAD LOAD DEAD + LIVE LOAD ---- PSF DEAD + LIVE + SEISMIC LOAD ---- PSF [NON-RESTRAINED] ACTIVE FARTH PRESSURE -- PCF ACTIVE EARTH PRESSURE -- PCF [RESTRAINED] PASSIIVE EARTH PRESSURE --- PCF

FOOTINGS SHALL BEAR ON ENGINEERED FILL COMPACTED TO AT LEAST 90 PERCENT AS SPECIFIED PER THE RECOMMENDATIONS OF THE SOILS REPORT. MINIMUM DEPTH OF FOOTINGS BELOW LOWEST ADJACENT GRADE SHALL BE --"

- 3. ALL NEW GRADE BEAMS AND FOOTINGS SHALL BEAR ON ENGINEERED FILL, COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION.
- 4. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE, IF REQUIRED.
- 5. CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING SHEATHING AND SHORING REQUIRED AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
- 6. EXCAVATION FOR NEW FOOTINGS AND GRADE BEAMS SHALL BE APPROVED BY THE INSPECTOR OR SOILS ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. CONTRACTOR TO NOTIFY THE INSPECTOR WHEN INSPECTION OF EXCAVATION IS READY. INSPECTOR TO SUBMIT LETTER OF COMPLIANCE.
- 7. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED WITH APPROVED COMPACTED FILL.

CONCRETE

- 1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318, LATEST EDITION.
- 2. CONCRETE MIXES SHALL BE DESIGNED BY THE APPROVED TESTING LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER. THE CONCRETE SHALL BE PROPORTIONED BASED ON ACL 318 AND ACL 301
- 3. PROVIDE NORMAL WEIGHT CONCRETE (145 pcf), WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN 0.05%, ATTAINING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS (f'c) AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONTINUOUS FOOTINGS 3000 psi 3000 psi SPREAD FOOTINGS 3000 psi SLABS ON GRADE RETAINING WALLS 4000 psi

- 4. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II
- AGGREGATE FOR HARDROCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C-33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH PERMISSION OF THE STRUCTURAL ENGINEER
- 6. CONCRETE MIXING OPERATION, ETC. SHALL CONFORM TO ASTM C-94
- 7. PLACEMENT OF CONCRETE SHALL CONFORM TO CODE SECTION 1905 AND PROJECT SPECIFICATIONS. CLEAN AND ROUGHEN TO 1/4" AMPLITUDE ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED.
- 8. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE
- 9. SUBMIT CONCRETE DESIGN MIX DATA FOR EACH TYPE AND COMPRESSIVE STRENGTH OF CONCRETE REQUIRED SIGNED BY AND BEARING THE SEAL OF A REGISTERED CIVIL ENGINEER TO THE RESIDENT ENGINEER. BASE DESIGN MIX ON FIELD EXPERIENCE OR TRIAL MIXTURES AS STIPULATED IN CBC SECTION 1905.3.
- 10. SUBMIT DRAWINGS TO RESIDENT ENGINEER INDICATING LOCATIONS OF CONCRETE CONSTRUCTION JOINTS FOR REVIEW PRIOR TO PLACING CONCRETE. LOCATE JOINTS AT LOCATIONS TO MINIMIZE EFFECTS OF SHRINKAGE AS WELL AS BEING PLACED AT POINTS OF LOW STRESS.
- 11. SLUMP SHALL NOT EXCEED 4 INCHES.
- 12. DO NOT USE CONCRETE OR GROUT CONTAINING CHLORIDES
- 13. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN NEW CONCRETE BEFORE PLACING. LOCATE EXISTING REINFORCING USING NON-DESTRUCTIVE METHODS PRIOR TO CORING NEW HOLES IN EXISTING CONCRETE. DO NOT CUT ANY EXISTING REINFORCING WHICH MAY CONFLICT WITH NEW HOLES UNLESS SPECIFICALLY APPROVED BY THE RESIDENT ENGINEER. SLEEVES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS AND SHALL NOT BE SPACED CLOSER THAN A MINIMUM OF 6 X SLEEVE DIAMETER.
- 14. CONDUITS LARGER THAN 1-1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. CONDUITS SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS AND SHALL NOT BE SPACED CLOSER THAN A MINIMUM OF 6 X CONDUIT DIAMETER. NO PIPES OF ANY SIZE SHALL BE EMBEDDED IN CONCRETE, UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER.
- FORM EXPOSED CORNERS OF COLUMNS, BEAMS, WALLS, ETC., WITH 3/4 INCH CHAMFERS UNLESS DETAILED OTHERWISE.
- 16. PROVIDE KEYS IN CONSTRUCTION JOINTS UNLESS DETAILED OTHERWISE. THOROUGHLY CLEAN REMOVE LAITANCE AND THOROUGHLY WET AND REMOVE STANDING WATER IN CONSTRUCTION JOINTS BEFORE PLACING NEW CONCRETE. AT VERTICAL JOINTS, SLUSH WITH A COAT OF NEAT CEMENT BEFORE PLACING NEW CONCRETE.
- 17. PERFORM CONCRETE WORK IN COMPLIANCE WITH ACI 301
- 18. MAINTAIN CONCRETE ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT UNLESS OTHERWISE ACCEPTED BY ARCHITECT (STRUCTURAL ENGINEER).
- 19. CONSOLIDATE CONCRETE IN PLACE USING A MECHANICAL VIBRATOR.
- 20. BEFORE PLACING CONCRETE SECURE REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND OTHER INSERTS IN POSITION TO PREVENT MOVEMENT.
- 21. ALL SLABS ON EARTH SHALL HAVE "QUICK-JOINT" INSTALLED TO PROVIDE APPROXIMATELY 20 FOOT SQUARES UNLESS DETAILED OTHERWISE ON THE PLANS.
- 22. WHERE CONCRETE POURS ARE STOPPED, THE JOINT SHALL BE FORMED PER TYPICAL CONSTRUCTION JOINT DETAIL.

REINFORCING STEEL

- 1. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 UNO. WELDABLE REBAR SHALL CONFIRM TO ASTM A706, GRADE 60.
- PROVIDE SMOOTH WELDED WIRE FABRIC COMPLYING WITH ASTM A1064. LAP FABRIC TWO SPACES (12" MINIMUM). PROVIDE DEFORMED WIRE STIRRUPS, SIZE D4 AND LARGER ONLY, COMPLYING WITH ASTM A1064.
- 3. BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- 4. THE CLEAR DISTANCE BETWEEN PARALLEL BARS SHALL NOT BE LESS THAN 1 1/2" UNLESS NOTED OTHERWISE.
- REINFORCING BAR SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS. MINIMUM SPLICE LENGTH FOR REINFORCING STEEL BARS IN MASONRY SHALL BE 40 BAR DIAMETERS, 24" MINIMUM. MINIMUM SPLICE LENGTH FOR REINFORCING STEEL BARS IN CONCRETE SHALL BE AS PER ACI 318 CHAPTER 12. LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS. STAGGER ALL SPLICES UNLESS NOTED OTHERWISE ON PLANS.
- 6. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
- 7. WHERE WELDING OF REINFORCING IS APPROVED BY THE STRUCTURAL ENGINEER, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING E90XX OR APPROVED ELECTRODES. WELDING PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF STRUCTURAL WELDING CODE— REINFORCING STEEL". AWS—D1.4. LATEST REVISION. REINFORCING BARS TO BE WELDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-706.
- BARS IN SLABS SHALL BE SECURELY SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, PRIOR TO PLACING CONCRETE.
- REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "A.C.I. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION
- 10. COMPLETE AND DETAILED REINFORCING PLACEMENT DRAWINGS SHALL BE PREPARED AND SUBMITTED TO THE ARCHITECT FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION IN ACCORDANCE WITH THE SPECIFICATIONS AND APPLICABLE CODES. THESE DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO PLACING OF CONCRETE.
- 11. MILL TEST REPORTS FOR GRADE 60 BARS SHALL BE SUBMITTED PRIOR TO PLACEMENT OF CONCRETE.
- CONTINUOUS INSPECTION OF CONCRETE SHALL INCLUDE INSPECTION DURING INSTALLATION OF REINFORCING STEEL. INSPECTION SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL, CONDUIT, SLEEVES, AND EMBEDDED ITEMS MAY BE CORRECTED PRIOR TO PLACEMENT OF OVERLYING GRIDS OR REINFORCING STEEL
- 13. ALL GRADE 60 REINFORCING STEEL SHALL BE CLEARLY MARKED TO DIFFERENTIATE THEM FROM GRADE 40 REINFORCING STEEL IF CONCURRENTLY ON SITE.
- 14. BEND REINFORCING STEEL COLD UNLESS OTHERWISE ACCEPTED BY ARCHITECT OR STRUCTURAL ENGINEER. PROVIDE SPECIAL INSPECTION OF ALL COLD BENT
- 15. UNLESS DETAILED OTHERWISE, REINFORCING STEEL IN CONTINUOUS BEAMS AND SPANDRELS SHALL HAVE THE TOP STEEL SPLICED @ MID-SPAN & THE BOTTOM STEEL SPLICED OVER SUPPORTS (30 DIA. MIN.). AT DISCONTINUOUS ENDS THE TOP STEEL SHALL BE BENT DOWN 12 DIA. OR 12" MIN. WHICHEVER IS GREATER.
- 16. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

MINIMUM COVER, IN. A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH B CONCRETE EXPOSED TO FARTH OR WEATHER NO. 6 THROUGH NO. 18 BAR NO 5 BAR, W31 OR D31 WIRE & SMALLER 1-1/2C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS: NO. 11 BAR & SMALLER

> BEAMS, COLUMNS: PRIMARY REINFORCEMENT TIES, STIRRUPS, SPIRALS

1-1/2

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V. AGARWAL D. ESTRADA R. QUIRK A. SOKOL

01-20-2017

30% SUBMITTAL





ANAHEIM CANYON **METROLINK STATION PROJECT**

ANAHEIM CANYON STATION STRUCTURAL GENERAL NOTES SHEET 1 OF 2

SS-101 REVISION SHEET NO. 58 OF 71 NONE

CONTRACT NO. PS2415-3412

2. STRUCTURAL STEEL SHALL CONFORM TO ASTM SPECIFICATIONS AS NOTED BELOW AND TO THE AISC SPECIFICATIONS FOR FABRICATION AND ERECTION:

A. WIDE FLANGE SHAPES: ASTM A572 GRADE 50 OR A992

B. OTHER ROLLED SHAPES AND PLATES: A36 U.N.O.

C. PIPES: ASTM A53, GRADE B (35 KSI)

D. TUBES: ASTM A500, GRADE B (46 KSI)

3. STEEL IDENTIFICATION PROCEDURES SHALL CONFORM TO ASTM A6.

B. HIGH STRENGTH BOLTS - ASTM A325, UNO

C. ANCHOR BOLTS IN CONCRETE - ASTM F1554 GRADE 36 HEADED ROD

5. INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE CONTINUOUSLY INSPECTED.

6. BOLT HOLES IN STEEL SHALL BE 1/16 INCH LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED, UNLESS NOTED OTHERWISE. SLOTTED HOLES SHALL BE 1/16 INCH OVERSIZED BY 2.5 TIMES THE BOLT DIAMETER.

7. WELDING SHALL CONFORM TO AWS D1.1 AND SHALL USE EITHER THE SHIELDED OR SUBMERGED ARC METHODS. ELECTRODES USED FOR WELDING TO A-36 STEEL SHALL BE E70XX. ELECTRODES FOR WELDING TO A-572 (GRADE50) STEEL SHALL BE E70XX LOW HYDROGEN TYPE. WELDERS SHALL BE CERTIFIED.

8. WELDING OF SHEET METAL AND METAL STUDS SHALL BE IN ACCORDANCE WITH AWS D1.3 PERFORMED BY CERTIFIED LIGHT GAUGE WELDERS.

9. SHOP WELDING SHALL BE DONE IN A SHOP OF A LICENSED FABRICATOR.

10. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC MANUAL OF STEEL CONSTRUCTION, SECTION SPECS J.

11. THE USE OF E70-T4 WELDING ELECTRODE IS NOT ALLOWED FOR ANY APPLICATION.

12. ALL WELD FILLER MATERIAL SHALL HAVE A MINIMUM CHARPY V-NOTCH (CVN) TOUGHNESS OF 20FT LBS AT A TEMPERATURE OF -20°F

13. ALL COMPLETE PENETRATION GROOVE WELDS CONTAINED IN JOINTS AND SPLICES SHALL BE TESTED 100%

14. MULTIPASS FIELD WELDING SHALL BE CONTINUOUSLY INSPECTED.

15. AN APPROVED WELDING INSPECTOR SHALL CONTINUOUSLY INSPECT ALL FIELD WELDING, EXCEPT MINOR OR TACK WELDING.

16. THICKNESS OF FILLET WELDS TO LIGHT-GAUGE STEEL ELEMENTS (STRAPS, TIES, HANGERS, ETC.) SHALL EQUAL THE FULL THICKNESS OF THE ELEMENT.

17. WELDS TERMINATING AT ENDS OR SIDES, WHEREVER POSSIBLE, SHALL BE RETURNED CONTINUOUSLY AROUND CORNERS A DISTANCE 2 TIMES THE NOMINAL SIZE OF THE WELD PER

18. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS FOR ARCHITECT'S AND STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION.

19. ALL FABRICATION SHALL BE DONE IN A SHOP OF AN APPROVED FABRICATOR.

20. STEEL FABRICATOR TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS. STEEL FABRICATOR TO COORDINATE WITH MECHANICAL SUBCONTRACTOR FOR THE SIZE, LOCATION & DIMENSIONS OF MECHANICAL UNITS AND OPENINGS.

ALL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION. ABRADED AREAS TO BE TOUCHED UP WITH GALVALLOY. ALL TUBES AND/OR PIPES SHALL HAVE WELDED CAP PLATES TO SEAL EXPOSED ENDS.

22. ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE, OR MASONRY, SPRAY ON FIREPROOFING, OR ARE ENCASED BY BUILDING FINISH, SHALL BE LEFT UNPAINTED.

23. PROVIDE ONE SHOP COAT OF PAINT ON ALL STRUCTURAL STEEL NOT COVERED WITH CONCRETE, FIREPROOFING, MASONRY OR AT CONTACT SURFACES AT HIGH STRENGTH BOLTS.

24. AT MOMENT CONNECTIONS: HIGH STRENGTH BOLTS SHALL BE FULLY TIGHTENED AFTER WELDING IS DONE AND WELDED CONNECTIONS SHALL BE INSPECTED BY NON-DESTRUCTIVE METHODS SUCH AS X-RAY, ULTRASONIC OR OTHERWISE. CHECK FOR LAMELLAR TEARING

25. ALL BEAM TO BEAM AND BEAM TO COLUMN FLANGE CONNECTIONS SHALL BE SINGLE SHEAR CONNECTIONS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS.

26. ALL CONNECTIONS SHOWN ON PLANS ARE TYPICAL. STEEL FABRICATOR TO DETAIL THOSE CONNECTIONS NOT SPECIFICALLY SHOWN AND SHALL SUBMIT SHOP DRAWINGS FOR STRUCTURAL ENGINEER REVIEW, AND APPROVAL

27. DO NOT PLACE OPENINGS IN STEEL MEMBERS UNLESS SPECIFICALLY DETAILED AND APPROVED BY THE STRUCTURAL ENGINEER.

CONSTRUCTION JOINTS

1. ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CBC CODE SECTION 1906.4 AND THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL DRAWINGS. AND ACI 360R.

2. ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS, OR OTHER FOREIGN MATTER PRIOR TO PLACING THE ADJACENT CONCRETE.

3. THE CONTRACTOR SHALL SUBMIT THE PROPOSED LOCATIONS OF CONSTRUCTION JOINTS TO THE ENGINEER FOR APPROVAL BY THE STRUCTURAL ENGINEER BEFORE STARTING CONSTRUCTION.

STRUCTURAL OBSERVATION

1. STRUCTURAL OBSERVATION IS REQUIRED FOR THE STRUCTURAL SYSTEM IN ACCORDANCE WITH COUNTY CODES. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR.

2. THE OWNER SHALL EMPLOY A CIVIL OR STRUCTURAL ENGINEER OR ARCHITECT TO PERFORM THE STRUCTURAL OBSERVATION. THE ENGINEER OR ARCHITECT SHALL BE REGISTERED OR LICENSED IN THE STATE OF CALIFORNIA. THE DEPARTMENT OF BUILDING AND SAFETY RECOMMENDS THE USE OF THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN WHEN THEY ARE INDEPENDENT OF THE CONTRACTOR.

3. THE STRUCTURAL OBSERVER SHALL PROVIDE EVIDENCE OF EMPLOYMENT BY THE OWNER. A LETTER FROM THE OWNER OR A COPY OF THE AGREEMENT FOR SERVICES SHALL BE SENT TO THE BUILDING INSPECTOR BEFORE THE FIRST SITE VISIT. THE STRUCTURAL OBSERVER SHALL ALSO INFORM THE OWNER OF THE REQUIREMENTS FOR A PRECONSTRUCTION MEETING AND SHALL PRESIDE OVER THIS MEETING.

4. THE OWNER OR OWNER'S REPRESENTATIVE SHALL COORDINATE AND CALL FOR A MEETING BETWEEN THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN STRUCTURAL OBSERVER, CONTRACTOR, AFFECTED SUBCONTRACTORS AND DEPUTY INSPECTORS THE PURPOSE OF THE MEETING SHALL BE TO IDENTIFY THE MAJOR STRUCTURAL ELEMENTS AND CONNECTIONS THAT AFFECT THE VERTICAL AND LATERAL LOAD SYSTEMS OF STRUCTURE AND TO REVIEW SCHEDULING OF THE REQUIRED OBSERVATIONS. A RECORD OF THE MEETING SHALL BE INCLUDED IN THE FIRST OBSERVATION REPORT SUBMITTED TO THE BUILDING INSPECTOR

5. THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STEPS IN THE PROGRESS OF THE WORK THAT ALLOW FOR CORRECTION OF DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF THE WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL OBSERVER:

CONSTRUCTION STAGES

ELEMENTS OR CONNECTIONS TO BE OBSERVED REINFORCING IN FOOTINGS, GRADE BEAMS, RET. WALLS

PRIOR TO CONCRETE PLACEMENT

6. THE STRUCTURAL OBSERVER SHALL PREPARE A REPORT FOR EACH SIGNIFICANT STAGE OF CONSTRUCTION OBSERVED. THE ORIGINAL OF THE OBSERVATION REPORT SHALL BE SENT TO THE BUILDING INSPECTOR'S OFFICE AND SHALL BE SIGNED AND SEALED (WET STAMP) BY THE RESPONSIBLE STRUCTURAL OBSERVER. ONE COPY OF THE OBSERVATION REPORT SHALL BE ATTACHED TO THE APPROVED PLANS. THE COPY ATTACHED TO THE PLANS NEED NOT BE SEALED BUT SHALL BE SIGNED BY THE RESPONSIBLE STRUCTURAL OBSERVER OR THEIR DESIGNEE. COPIES OF THE REPORT SHALL ALSO BE GIVEN TO THE OWNER, CONTRACTOR, AND

7. A FINAL OBSERVATION REPORT MUST BE SUBMITTED WHICH SHOWS THAT ALL OBSERVED DEFICIENCIES WERE RESOLVED AND THE STRUCTURAL SYSTEM GENERALLY CONFORMS WITH THE APPROVED PLANS AND SPECIFICATIONS. THE DEPARTMENT OF BUILDING AND SAFETY WILL NOT ACCEPT THE STRUCTURAL WORK WITHOUT THIS FINAL OBSERVATION REPORT AND THE CORRECTION OF SPECIFIC DEFICIENCIES NOTED DURING NORMAL BUILDING AND DEPUTY INSPECTION.

8. WHEN THE OWNER ELECTS TO CHANGE THE STRUCTURAL OBSERVER OF RECORD, THE OWNER SHALL:

NOTIFY THE BUILDING INSPECTOR IN WRITING BEFORE THE NEXT INSPECTION,

CALL AN ADDITIONAL PRECONSTRUCTION MEETING, AND.

C) FURNISH THE REPLACEMENT STRUCTURAL OBSERVER WITH A COPY OF ALL PREVIOUS OBSERVATIONS REPORTS

THE REPLACEMENT STRUCTURAL OBSERVER SHALL APPROVE THE CORRECTION OF THE ORIGINAL OBSERVED DEFICIENCIES UNLESS OTHERWISE APPROVED BY PLAN CHECK SUPERVISION. THE POLICY OF THE DEPARTMENT SHALL BE TO CORRECT ANY PROPERLY NOTED DEFICIENCIES WITHOUT CONSIDERATION OF THEIR SOURCE.

9. THE RESIDENT ENGINEER SHALL DEVELOP ALL CHANGES RELATING TO THE STRUCTURAL SYSTEMS. THE BUILDING DEPARTMENT SHALL REVIEW AND APPROVE ALL CHANGES TO THE APPROVED PLANS AND SPECIFICATIONS.

SPECIAL INSPECTION NOTES:

1.	GENERAL: REFER TO CHAPTER 17 OF CBC, TITLE 24 FOR AMPLIFICATION OF, AND/OR EXCEPTIONS TO, THE FOLLOWING REQUIREMENTS (E.G., MASONRY, WELDING, ETC.). ALL SPECIAL INSPECTORS MUST SUBMIT FINAL REPORTS. REQUIRED	
2.	FOUNDATIONS: REQUIRED I	-
	A. ENGINEERING FILL (BY THE GEOTECHNICAL ENGINEER)	
3.	CONCRETE:	
	A. CONCRETE OVER 2500 PSI AT 28 DAYS	
	DI CONCILIE I DICEMENT IN CEID ON CINDENNIN	
	C. REINFORCEMENT PLACEMENT VERIFICATION OF MILL REPORTS	
	AND IDENTIFICATION OF STEEL AND AT JOB SITE	
4.	WELDING: (SEE CBC FOR EXCEPTIONS)	
	A. WELDING SHALL BE INSPECTED BY AN AWS CERTIFIED INSPECTOR	
	APPROVED BY THE BUILDING DEPARTMENT	
5.	BOLTING:	
		\Box
	B. EXPRISION BODIS IN CONTOURS ON MINOCHANT	
	or refreshed the content of the cont	
ь.	STRUCTURAL STEEL:	
	The mile the ones a betting of the steel (the botter of commentation)	=
7	APPROVED FABRICATORS:	_
/٠	A. MUST SUBMIT CERTIFICATE OF COMPLIANCE FOR	
	OFFSITE FABRICATION SUCH AS STRUCTURAL STEEL.	
	PRECAST CONCRETE, GLUED LAMINATED TIMBER, ETC.	
8.	INSPECTORS:	_
	ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY REPRESENTATIVE OF OWNER	
	APPROVED INSPECTOR EMPLOYED BY THE OWNER IN ACCORDANCE WITH THE	
	REQUIREMENTS OF THE STATE OF CALIFORNIA CODE OF REGULATIONS, TITLE 24,	
	PART 1. JOB SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE AND	
	ARE NOT A SUBSTITUTE FOR THE INSPECTIONS BY AN INSPECTION AGENCY. ALL	
	TESTING AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE STRUCTURAL	
	ENGINEER OF RECORD. THE FINAL REPORT BY THE TESTING AND INSPECTION AGENCIES	
	MUST CERTIFY THAT THE ENTIRE STRUCTURAL SYSTEM COMPLIES WITH THE APPROVED	
	PLANS AND DESIGNER'S SPECIFICATIONS.	

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT THESE TESTS AND INSPECTIONS ARE PERFORMED.

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CHECKED BY

01-20-2017

V. AGARWAL 30% D. ESTRADA SUBMITTAL R. QUIRK A. SOKOL

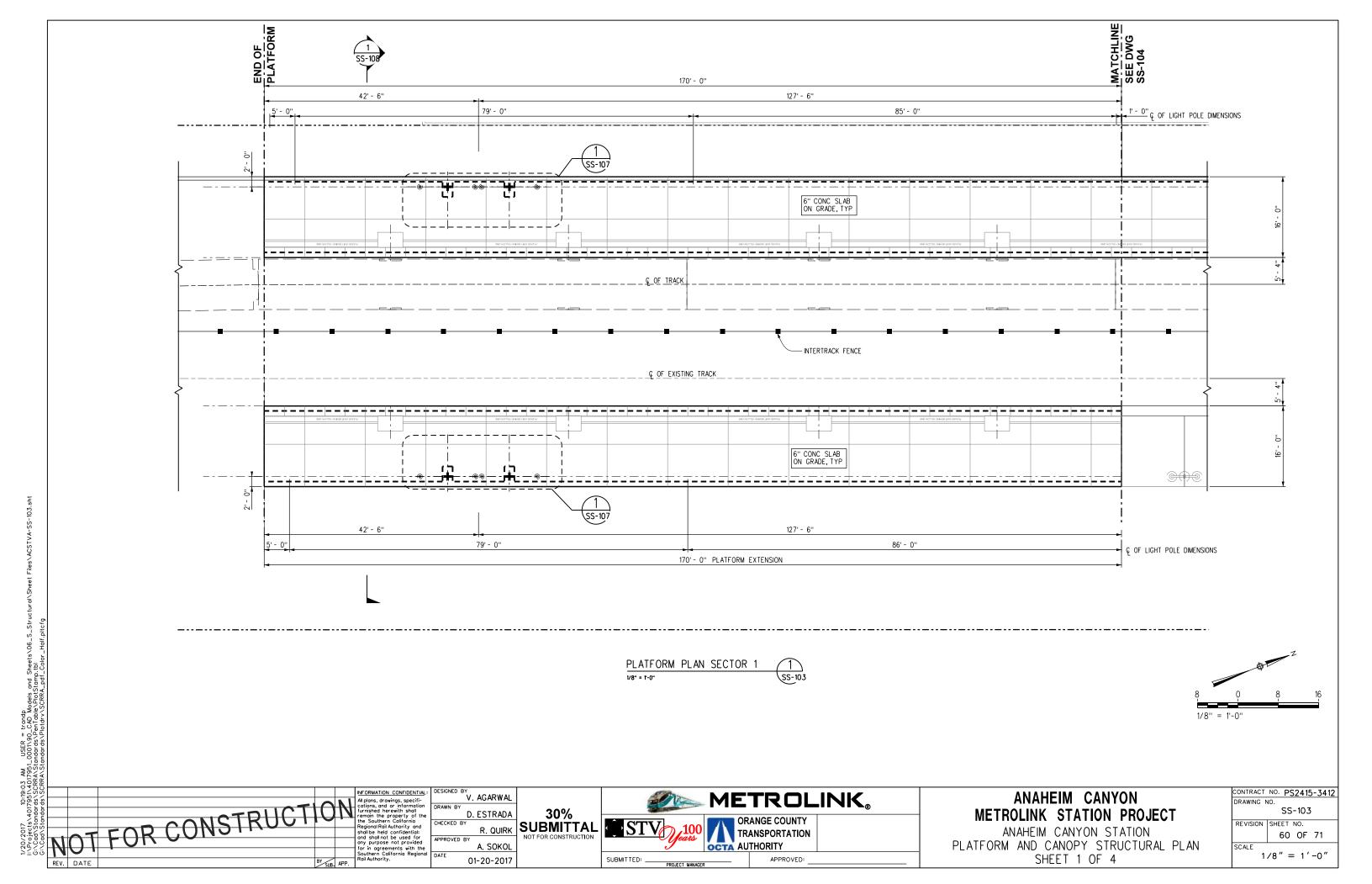


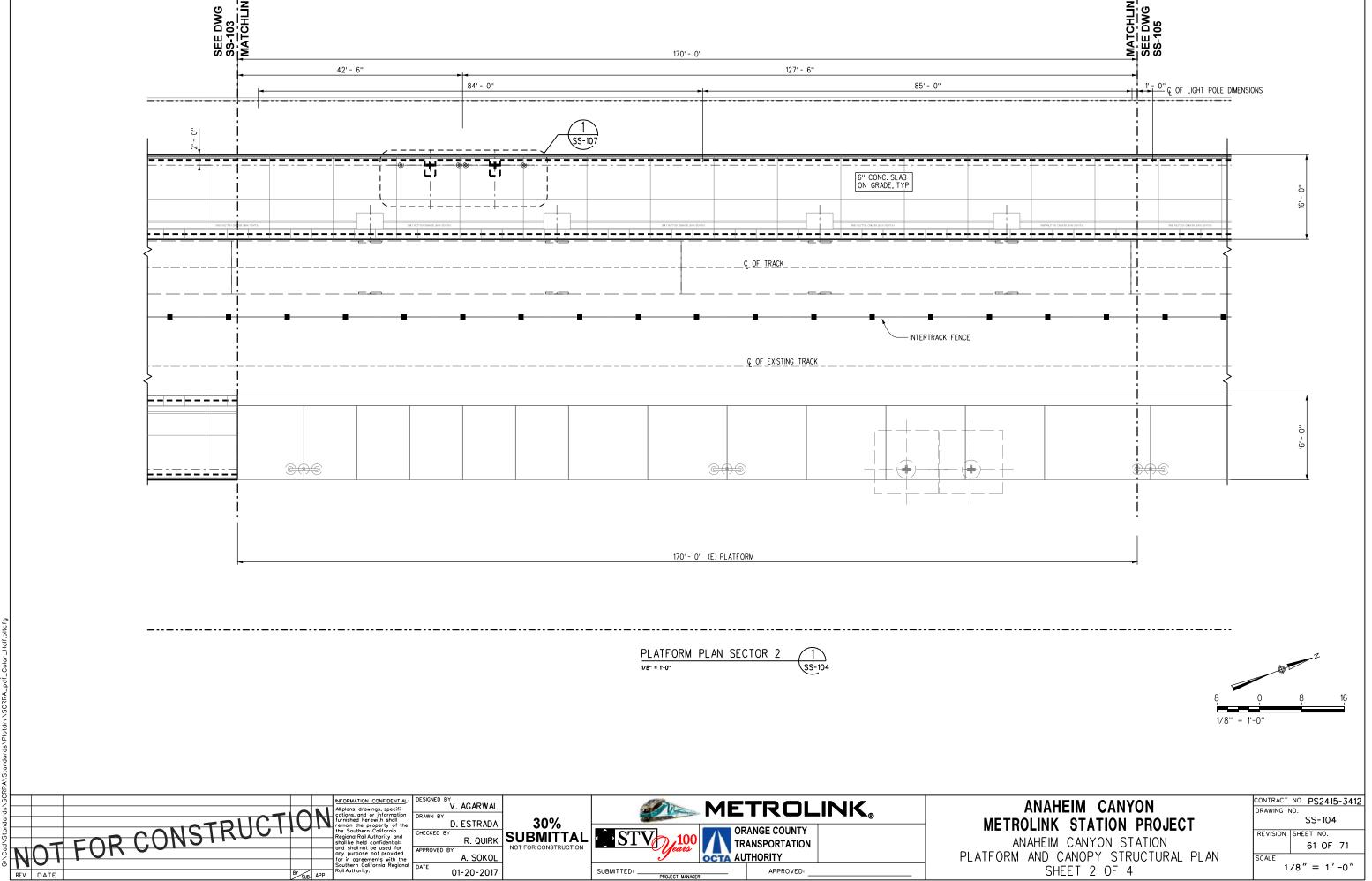


ANAHEIM CANYON METROLINK STATION PROJECT

ANAHEIM CANYON STATION STRUCTURAL GENERAL NOTES SHEET 2 OF 2

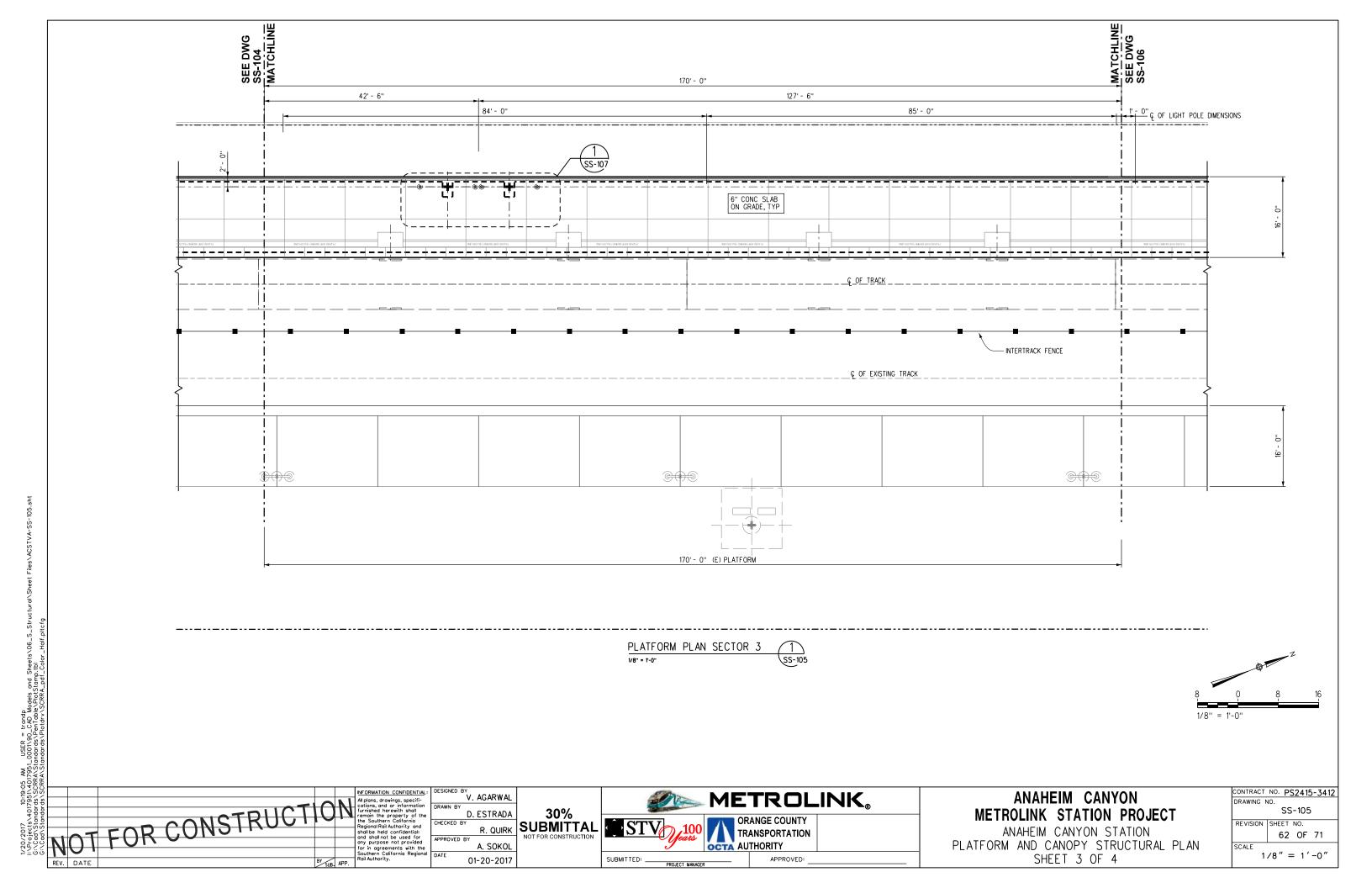
CONTRACT NO. PS2415-3412 SS-102 REVISION SHEET NO. 59 OF 71 NONE

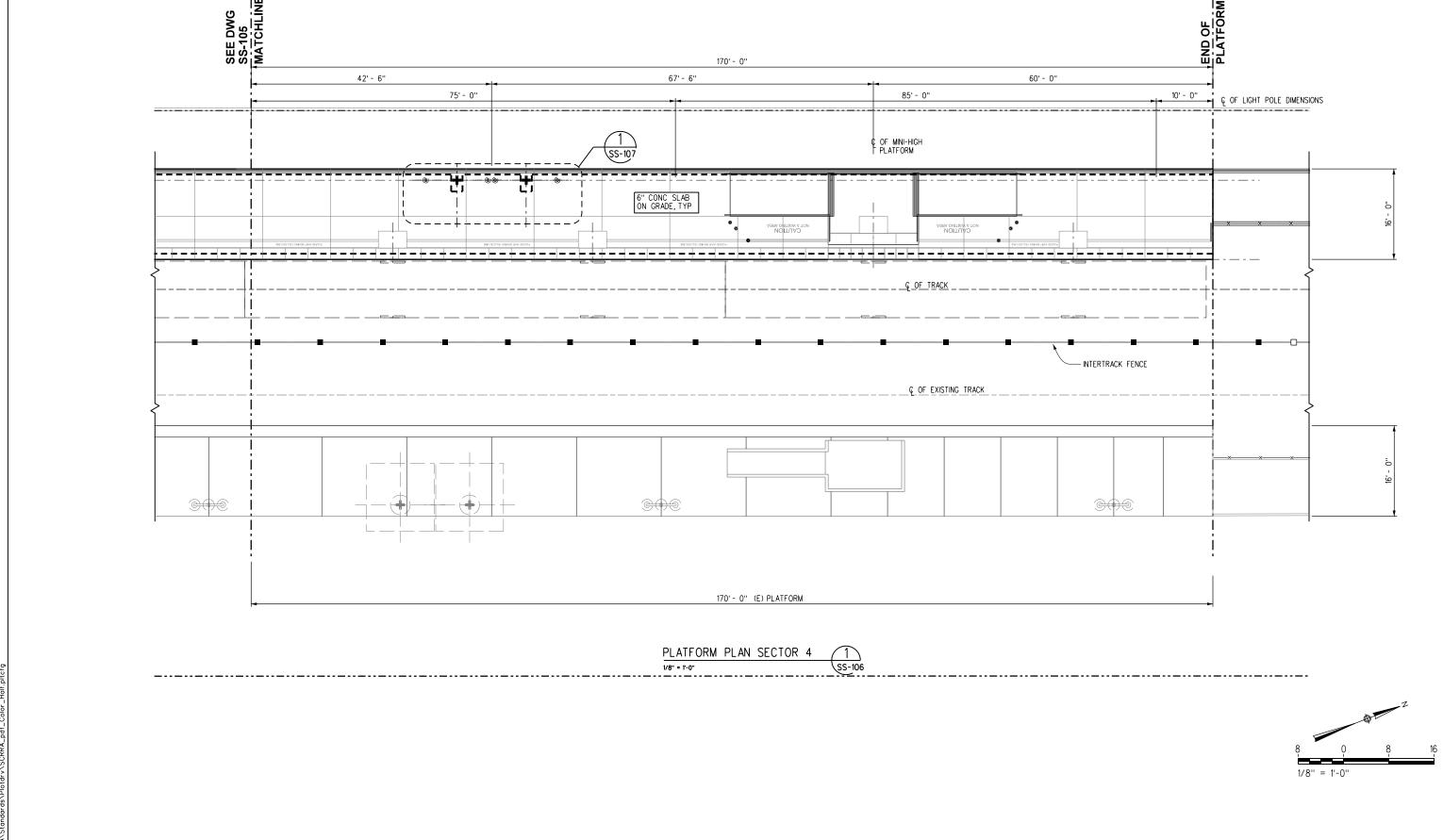




SUBMITTED: ___

01-20-2017





NOT FOR CONSTRUCTION

V. AGARWAL

D. ESTRADA

R. QUIRK

A SOLO:

NOT FOR CONSTRUCTION:

D. ESTRADA

A. SOKOL

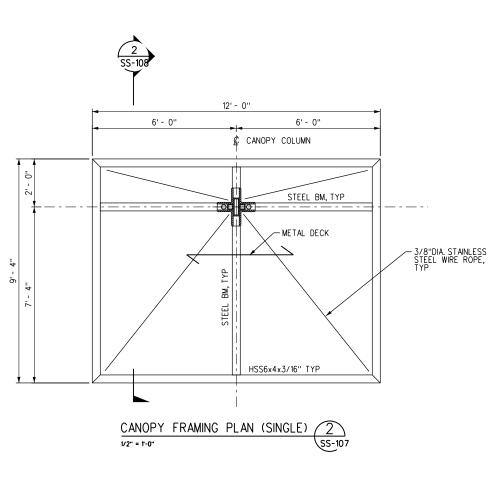
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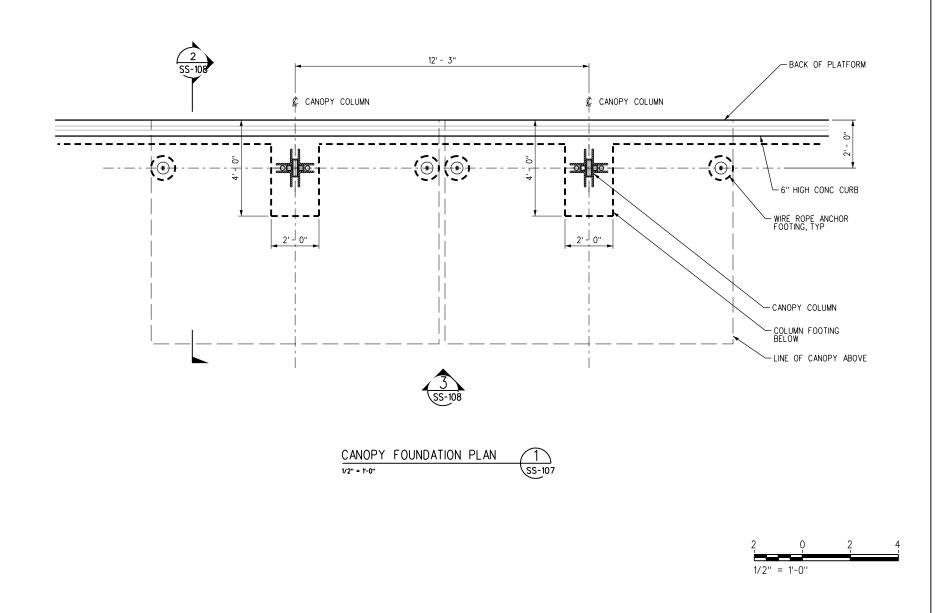


ANAHEIM CANYON **METROLINK STATION PROJECT**

ANAHEIM CANYON STATION
PLATFORM AND CANOPY STRUCTURAL PLAN
SHEET 4 OF 4

CONTRACT	NO. PS2415-3412
DRAWING 1	١٥.
	SS-106
REVISION	SHEET NO.
	63 OF 71
SCALE	
1	/8" = 1'-0"





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DESIGNED BY V. AGARWAL

D. ESTRADA

A. SOKOL

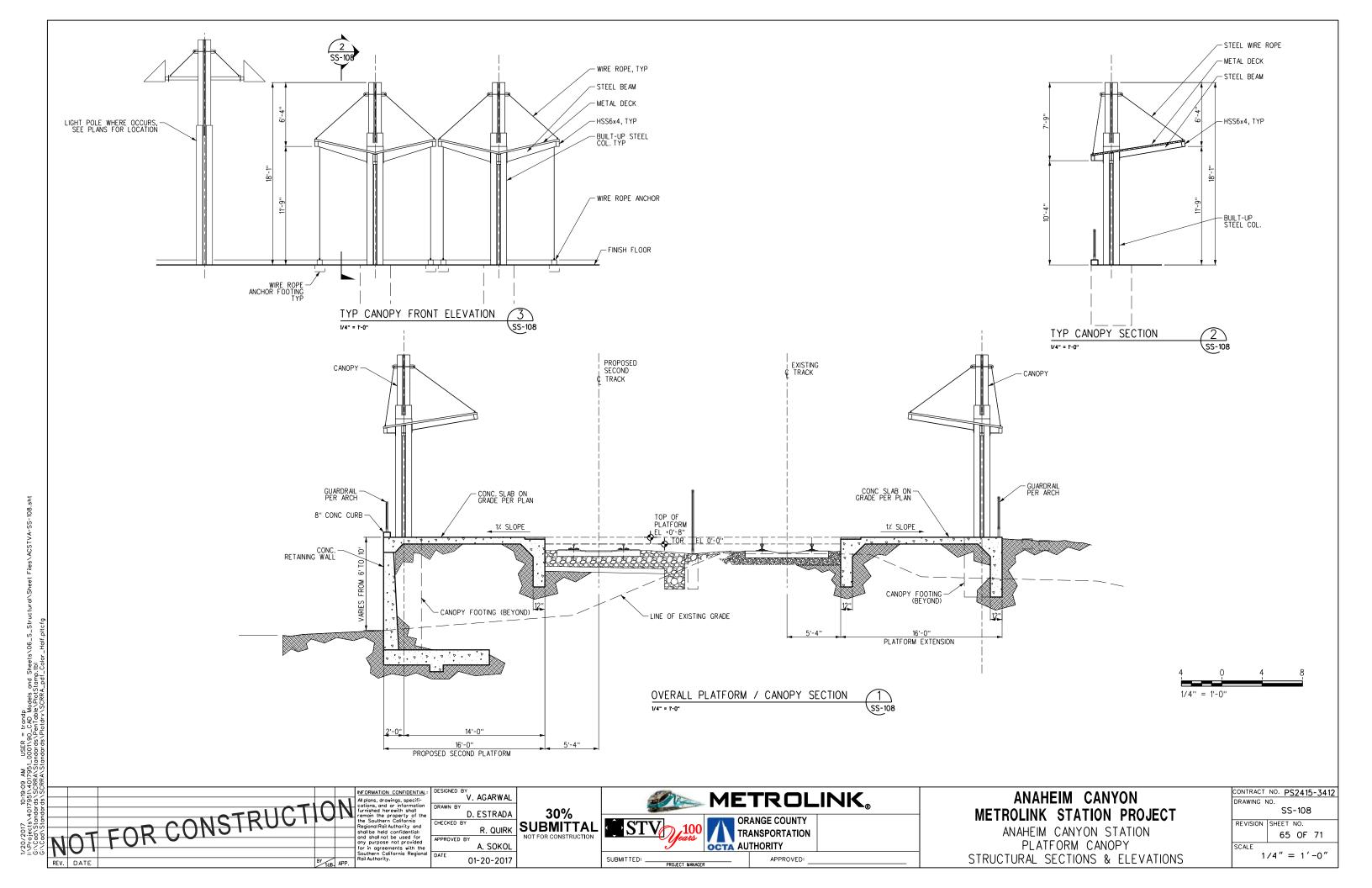
01-20-2017

R. QUIRK SUBMITTAL NOT FOR CONSTRUCTION

METROLINK_® ORANGE COUNTY TRANSPORTATION OCTA AUTHORITY SUBMITTED: _

ANAHEIM CANYON METROLINK STATION PROJECT

ANAHEIM CANYON STATION PLATFORM CANOPY STRUCTURAL PLAN CONTRACT NO. PS2415-3412 SS-107 REVISION SHEET NO. 64 OF 71 1/2" = 1'-0"



POWER SYMBOLS

JUNCTION BOX

RECEPTACLE DUPLEX 3-WIRE GROUNDING TYPE, 20AMP, 125VAC WALL MOUNTED AT 15"AFF UNO, GFCITYPE

RECEPTACLE DUPLEX 3-WIRE GROUNDING TYPE, 20AMP, 125VAC WALL MOUNTED AT 15"AFF UNO

POWER PANEL SURFACE MOUNTED

LIGHTING PANEL SURFACE MOUNTED

EMBEDDED, OR UNDERGROUND CONDUIT

CONDUIT AND WIRE HOMERUN TO PANEL & CIRCUITS NOTED

CONDUIT CONCEALED, OR IN CEILING SPACE

— |||||| 7#12 1''C 4#12 3/4"C

> #10 OR OTHER AWG ADJACENT TO HASHMARKS INDICATES A WIRE SIZE OTHER THAN #12AWG SEE NEC FOR MINIMUM CONDUIT

FEEDER NAME. XXX DENOTES LETTERS FOR FEEDER TAG DESIGNATION

> POWER EQUIPMENT NAME. XXX DENOTES LETTERS FOR EQUIPMENT TAG DESIGNATION

THERMOSTAT, BY OTHERS

SIZES, ANNEX C-TABLES.

GROUND ROD IN WELL

5*12 3/4"C

ELECTRICAL PULLBOX PER SCRRA STANDARD

GENERAL NOTES

- DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY ADDITIONAL REQUIREMENTS AND COORDINATION.
- 2. CUT STEEL CONDUIT ENDS SQUARE, REAM SMOOTH, PAINT MALE THREADS OF FIELD THREADED CONDUIT WITH GRAPHITE BASE PIPE COMPOUNDS DRAW UP TIGHT WITH CONDUIT COUPLINGS.
- LEAVE WIRE SUFFICIENTLY LONG TO PERMIT MAKING FINAL CONNECTIONS.
- 4. COVERS OF JUNCTION AND PULL BOXES SHALL BE ACCESSIBLE.
- PROVIDE PULL BOXES AND MANHOLES AS INDICATED AND WHENEVER NECESSARY TO FACILITATE CABLE PULL AND COORDINATE EXACT LOCATIONS WITH OTHER TRADES.
- 6. FOR EMPTY RACEWAY RUNS, PROVIDE PULL BOXES EVERY 100 FEET AND AS INDICATED. COORDINATE EXACT LOCATIONS WITH OTHER TRADES.
- 7. SUPPORT PANEL, JUNCTION AND PULL BOXES WITH NO WEIGHT BEARING ON CONDUITS.
- SUPPLEMENTARY JUNCTION AND PULL BOXES IN ADDITION TO THE INDICATED ON THE CONTRACT DRAWINGS AND AS REQUIRED BY APPLICABLE CODES, PROVIDE AND INSTALL SUPPLEMENTARY JUNCTION AND PULL BOXES AS FOLLOWS:

1. WHEN REQUIRED TO FACILITATE INSTALLATION OF WIRING. AT EVERY THIRD 90 DEGREE TURN.

- 3. AT INTERVALS NOT EXCEEDING 100 FEET FOR RACEWAY SIZES OVER 1 INCH.
- 9. ALL RECEPTACLES INDICATED "GFI" SHALL BE GROUND FAULT INTERRUPTER TYPE.
- 10. ALL CONDUITS SHALL BE PVC MINIMUM 2'-0" BELOW GRADE.
- ALL LIGHT POLE IN PARKING AREAS SHALL BE PROVIDED WITH 2-2"C/O WITH PULL WIRE (WIRING BY OTHERS) FOR CCTV SYSTEM FUTURE USE. ROUTE CONDUITS TO COMMUNICATION SHELTER
- 12. PROVIDE 12" SEPARATION BETWEEN POWER AND COMMUNICATION CONDUITS.
- 13. PROVIDE 6'LONG PIGTAIL AT EACH TVM LOCATION TO ALLOW CONNECTION OF (3) CONDUCTORS TO EQUIPMENT
- 14. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL WIRE.
- 15. ALL CONDUCTORS RUNNING FROM STATION POWER PANEL TO EACH TVM LOCATIONS SHALL HAVE XHHW INSULATION.
- 16. INSTALLATION OF CABLES IN D/T CONDUIT SYSTEM SHALL BE BY SCRRA.
- 17. REFER TO SCRRA ENGINEERING STANDARDS ES*1103 AND ES*3001 FOR ABBREVIATIONS, LEGEND AND NOTES.
- 18. PROVIDE NEMA 3R ENCLOSURE TO ALL PANELBOARDS/LIGHTING CONTROL PANELS INSTALLED
- 19. PROVIDE 4" HOUSEKEEPING PAD FOR ALL ELECTRICAL FLOOR MOUNTED EQUIPMENT. COORDINATE DIMENSIONS WITH ACTUAL SIZE SELECTED.
- 20. ELECTRICAL AND COMMUNICATION PULL BOXES AT LIGHT POLES SHALL BE INSTALLED AT 6'-0" ON CENTER MINIMUM FROM THE CENTER OF TREE WHERE OCCURS PER LANDSCAPE DRAWINGS. COORDINATE WITH LANDSCAPE PRIOR TO INSTALLATION. WHERE INSTALLED NEAR CONSTRUCTION AND EXPANSION JOINTS, A MINIMUM CLEAR DISTANCE OF 12" FROM THE EDGE OF PULL BOX SHALL BE MAINTAINED.
- 21. WHEREVER POSSIBLE, CONDUITS SHALL BE ROUTED IN LANDSCAPE OR UNDER NON-PAVED AREAS AND AS CLOSE AS POSSIBLE TO ONE ANOTHER WITHIN THE SAME TRENCH TO MINIMIZE PAVEMENT DAMAGE WHEN REPAIRS ARE REQUIRED.
- 22. ALL UNDERGROUND CONDUITS SHALL BE BURIED 24" MINIMUM MEASURED BETWEEN A POINT ON THE TOP SURFACE OF ANY CONDUIT/RACEWAY AND THE TOP SURFACE OF FINISHED GRADE, CONCRETE OR SIMILAR COVER UNLESS OTHERWISE NOTED. AREAS SUBJECT TO HEAVY VEHICULAR TRAFFIC SHALL HAVE A 3" MINIMUM CONCRETE ENCASEMENT. REFER TO CIVIL PAVING PLAN FOR ADDITIONAL INFORMATION.
- 23. ALL UNDERGROUND CONDUITS FOR CCTV SYSTEM USE SHALL BE ROUTED TO COMMUNICATION BUILDING FOR FINAL TERMINATION UNLESS OTHERWISE NOTED. COORDINATE WITH OTHER TRADES FOR EXACT ROUTING PRIOR TO ROUGH-IN.
- 24. ALL ELECTRICAL AND COMMUNICATION PULL BOXES SHALL HAVE THE FOLLOWING LOAD
- A. UNITS LOCATED IN ROADWAYS, PARKING LOTS AND OTHER DELIBERATE TRAFFIC PATHS:
 PRECAST CONCRETE AASHTO HB 17, H-20 STRUCTURAL LOAD RATING.
 B. UNITS IN PLATFORM AND OFF ROADWAY LOCATIONS SUBJECT TO OCCASIONAL NON-DELIBERATE LOADING BY HEAVY VEHICLES: POLYMER CONCRETE, SCTE 77 TIER 15

STRUCTURAL LOAD RATING.
C. UNITS IN SIDEWALK WITH A SAFETY FACTOR FOR NON-DELIBRATE LOADING BY
VEHICLES: POLYMER CONCRETE UNITS, SCTE 77 TIER 8 HEAVY DUTY FIBERGLASS UNITS WITH
POLYMER CONCRETE FRAME AND COVER, SCTE 77 TIER 8 STRUCTURAL LOAD RATING.
D. UNITS SUBJECT TO LIGHT DUTY PEDESTRIAN TRAFFIC ONLY: FIBERGLASS REINFORCED
POLYESTER RESIN, STRUCTURALLY TESTED ACCORDING TO SCTE 77 WITH 3000 LBF VERTICAL

ABBREVIATIONS

AMPERE

AFF ABOVE FINISHED FLOOR AFR AMPERE FRAME AIC AMPERES INTERRUPTING CAPACITY AMPERE TRIP CBKR CIRCUIT BREAKER

CCTV CLOSED CIRCUIT TELEVISION CKT CIRCUIT

A, AMP

ΑT

D/T

CPB COMMUNICATION PULL BOX CENTER LINE

C/0 CONDUIT ONLY

DATA ACQUISITION/TELEPHONE DVM DEBIT CARD VALIDATOR MACHINE FMP EMERGENCY MANAGEMENT PANEL

EPB ELECTRICAL PULL BOX

EPIS ELECTRONIC PASSENGER INFORMATION SYSTEM

GFI GROUND FAULT INTERRUPTER GROUND, GROUNDING

GRS GALVANIZED RIGID STEEL CONDUIT

ΗН HANDHOLE ΗP HORSEPOWER Н7 HFRT7

IMC INTERMEDIATE METAL CONDUIT

KVAKILOVOLT AMPERE LC LOAD CENTER

LED LIGHT EMMITTING DIODE MESSAGE SIGN

LΡ LIGHTING PANEL МН MANHOLE

MTTV MULTI-TRIP TICKET VALIDATOR MACHINE

MTG MOUNTING

NIC NOT IN CONTRACT **POWER**

РΔ PUBLIC ADDRESS PP POWER PANEL PVC POLYVINYL CHLORIDE

PV PHOTOVOLTAIC SOFT DRAWN BARE COPPER

SDBC SW SWITCH

SWGR SWITCHGEAR

TVM TICKET VENDING MACHINE

TYP TYPICAL UNO UNLESS NOTED OTHERWISE

VOLT WATT

WEATHERPROOF

WPC WAYSIDE POWER CABINET XFMR TRANSFORMER

NOTE:

ALL SYMBOLS SHOWN ARE NOT NECESSARILY USED ON THIS PROJECT

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R. FEE M. MAMAWAL R. QUIRK A. SOKOL

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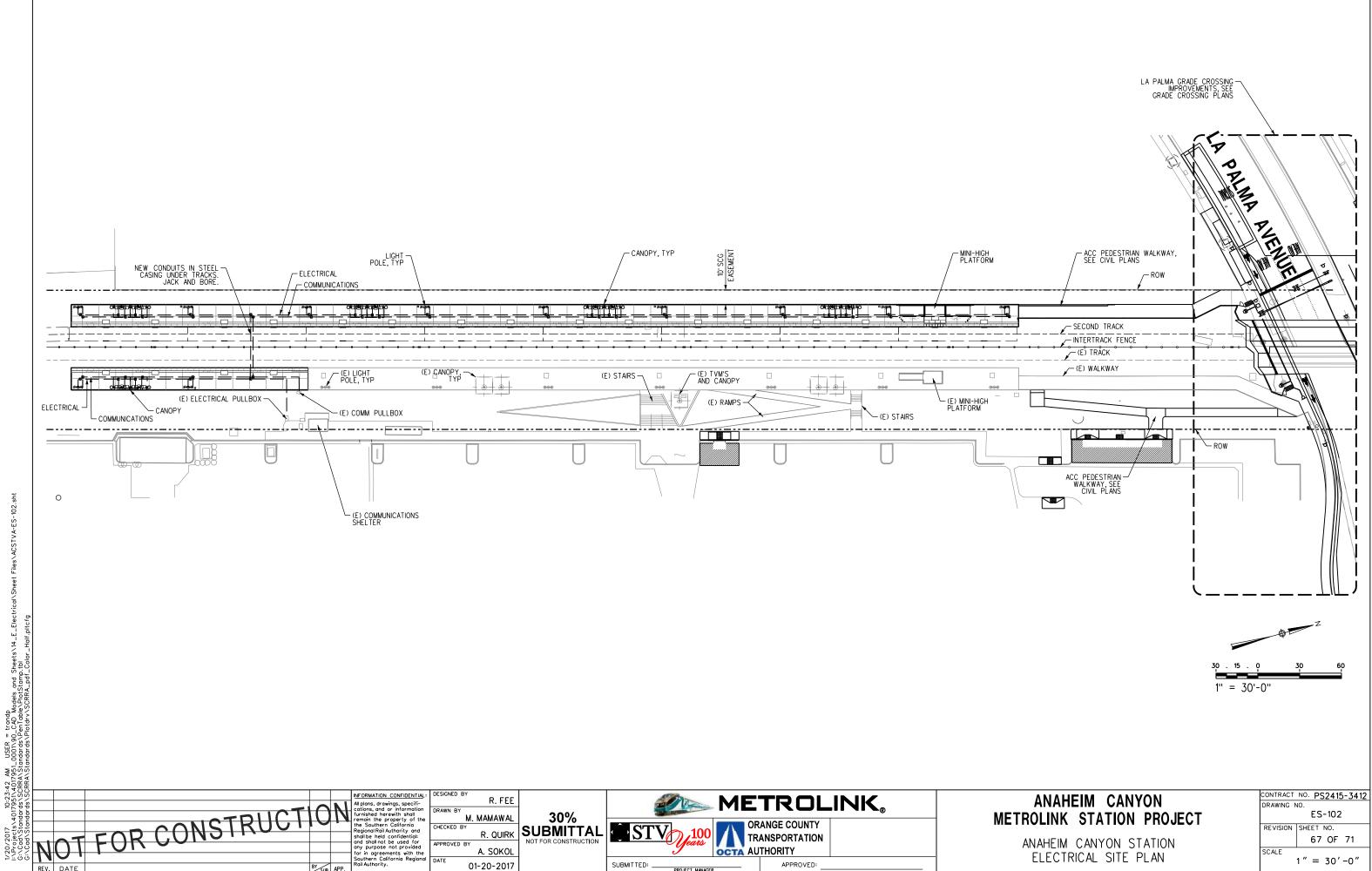
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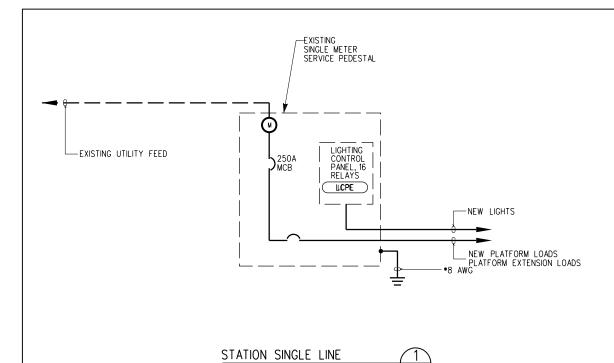


ANAHEIM CANYON METROLINK STATION PROJECT

ANAHEIM CANYON STATION ELECTRICAL GENERAL NOTES SYMBOLS AND ABBREVIATIONS CONTRACT NO. PS2415-3412 DRAWING NO ES-101 SHEET NO. REVISION 66 OF 71 SCALE NONE

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R. FEE MAMAWAL
R. QUIRK
SUBMITTAL
NOT FOR CONSTRUCTION M. MAMAWAL A. SOKOL

01-20-2017

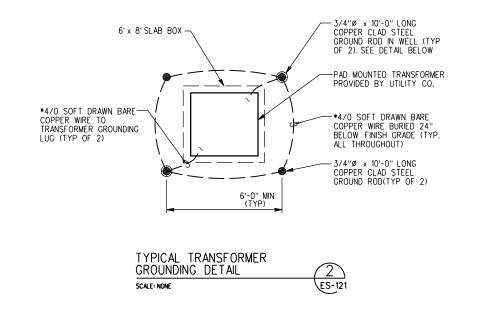
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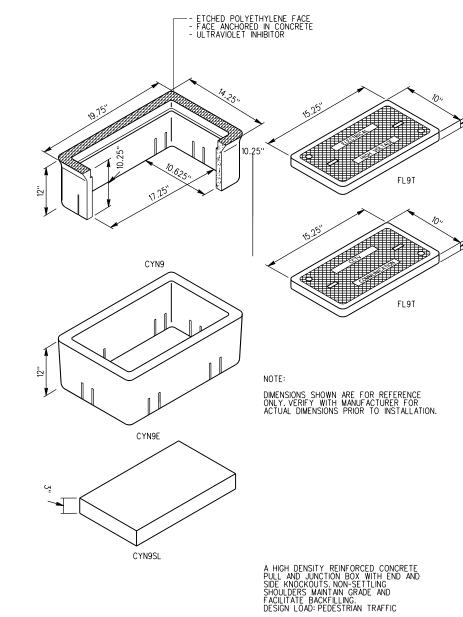


ANAHEIM CANYON **METROLINK STATION PROJECT**

ANAHEIM CANYON STATION STATION SINGLE LINE DIAGRAM AND PANEL SCHEDULE

	NO. PS2415-341
DRAWING I	NO.
	ES-111
REVISION	SHEET NO.
	68 OF 71
SCALE	
	NONE





CATALOG NUMBER	PRODUCT	DESCRIPTION	APPROX. WT. (LBS)
CYN9	BOX	REINFORCED CONCRETE	85
FL9T	LID	NONMETALLIC LID W/HOLD DOWN BOLTS	6
CYN9-61J	COVER	STEEL CHECKER PLATE W/HOLD DOWN BOLTS	19
CYN9E	EXTENSION	12" HIGH REINFORCED CONCRETE	82
CYN9SL	SLAB	REINFORCED CONCRETE	30

ELECTRICAL/COMMUNICATION UNDERGROUND PULL BOX

SCALE: NONE



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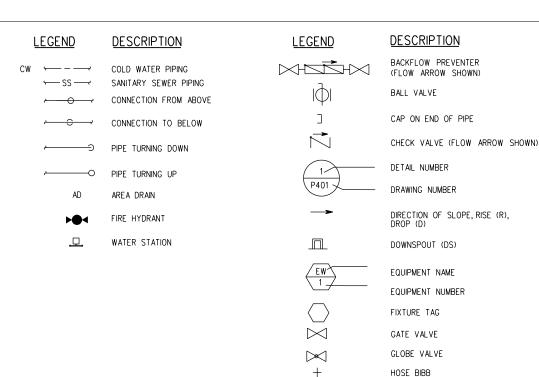




ANAHEIM CANYON **METROLINK STATION PROJECT**

ANAHEIM CANYON STATION ELECTRICAL DETAILS

CONTRACT		PS	241	5-341
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POINT OF CONNECTION (POC)

QUICK DISCONNECT

	PLUMBING DRAWING INDEX
DWG. NO.	SHEET TITLE
PS-101	PLUMBING GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
PS-111	PLUMBING SITE PLAN

ABBREVIATIONS

PLUMBING NOTES:

INVERT

INV

- 1. ALL WORK SHALL CONFORM TO 2013 CALIFORNIA PLUMBING CODE, 2013 CALIFORNIA BUILDING CODE, 2013 TITLE-24, NFPA AND ALL APPLICABLE STATE AND LOCAL CODES AND REGULATIONS.
- 2. IN ALL CASES OF CONFLICT BETWEEN DRAWINGS, CODES, AND STANDARDS, THE STRICTEST SHALL GOVERN.
- 3. CONTRACTOR SHALL PROVIDE MATERIALS, LABOR AND EQUIPMENT SUFFICIENT TO COMPLETE ALL INDICATED
- 4. THE PLUMBING WORK SHALL BE COORDINATED WITH THAT OF OTHER DISCIPLINES SO THAT ALL WORK MAY PROCEED IN A TIMELY FASHION.
- 5. FOR EXACT PLACEMENT OF EACH PLUMBING FIXTURE, REFER TO ARCHITECTURAL DRAWINGS.
- 6. PROVIDE PIPE MARKERS FOR ALL PIPING AS APPLICABLE AND AS NOTED IN PLUMBING SPECIFICATIONS.
- 7. SEAL THE SPACING BETWEEN CARRIER PIPE AND SLEEVES FOR ALL PIPE PENETRATIONS THROUGH SLABS, WITH FLEXIBLE WATERPROOF SEALANT, TO PREVENT MIGRATION OF GROUND WATER INTO DRY AREAS.
- 8. ALL WATER SYSTEMS SHALL BE COLOR CODED (2013 CPC 601.2.2).
- ALL BACKFLOW PREVENTION DEVICES COMPLY WITH TABLE 6-2, EXCEPT FOR SPECIFIC APPLICATIONS AND PROVISIONS AS STATED IN SECTIONS 603.4 THROUGH 603.4.22 (2013 CPC 603.1).

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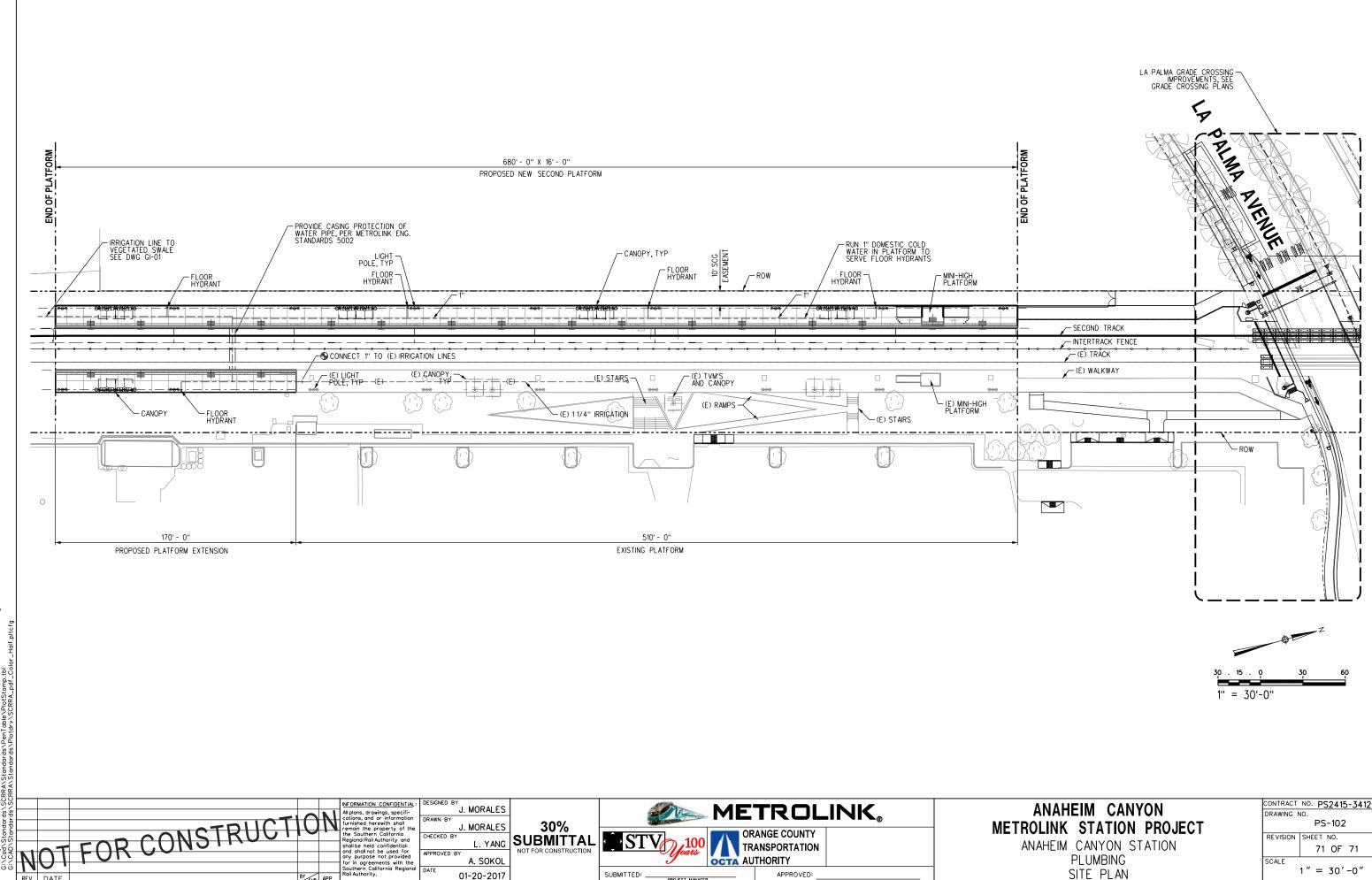
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ANAHEIM CANYON METROLINK STATION PROJECT

ANAHEIM CANYON STATION PLUMBING GENERAL NOTES. SYMBOLS AND ABBREVIATIONS CONTRACT NO. **PS2415-3412** DRAWING NO. PS-101 REVISION SHEET NO. 70 OF 71 SCALE NONE



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